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The Newspaper of the Industry

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IN THIS ISSUE

The Beverage Cooler Game

Selling mechanically refrigerated beverage coolers in a metropolitan area can be a big-time, highly profitable piece of business—but you've got to know how. KEEPING those beverage coolers sold, and collecting on them, takes a technique all of its own, which I. R. Rozett of Chicago apparently has. For the number of readers who have wanted to know how he does it—see page 6.

Something New Every Day

The nice thing about commercial refrigeration is that they find more uses for it every day. Read about a new type of candy display case, and a new storage idea for small orchardists, on page 9.

Who's Crazy?

He does the "CUH-raziest things." That's Harry Wasserman, household refrigerator dealer in Toledo, who gives away magazine subscriptions with sales, offers to pay the light bill if it goes over a certain figure, and who puts a water cooler out on the sidewalk when it gets hot. He also does a 400 to 500 unit volume per year. Page 5.

Little Units - - Big Job

Are store coolers encroaching upon the field that was seemingly reserved for central-station types of air conditioning systems? Maybe not in all cases, but an installation for a large store in Providence, R. I. indicates what can be done. Page 11.

Patriotism In Windows

How to create a patriotic window display is told in a step-by-step picture story told on page 14. Those interested in display work should find food both in the idea and the manner in which it was executed.

Both Foods and Equipment

Something new in frozen foods promotion work is being tried in Detroit. A store has been opened which will sell both frozen foods and a special unit for keeping them in the home. Told on page 10.

Speaking Technically

On the technical side, F. O. Jordan supplies some additional data in answering questions from readers who read his dissertation on "How to Make a Home-Made Flowmeter." He gives some formulae of help in using a flowmeter. Page 7. Black & Seitz, in their series on counter freezer service, continue their discussion of service faults that may seem to point to a thermostatic expansion valve, but have the seat of the trouble somewhere else. Page 13.

Edw. Heitman, Kelvinator Engineer, Dies In Canada

MONTREAL, Canada — Edward Heitman, former Kelvinator chief engineer and widely known in the refrigeration industry, died here Sept. 25, being stricken with a heart attack while on the golf course. He had been visiting relatives here.

For the past two years Mr. Heitman had been in semi-retirement, doing consulting work for Kelvinator. For the 10 years from 1928 to 1938 he had been chief engineer for Kelvinator.

Born in Milwaukee in 1871, Mr. Heitman was graduated from Cornell university in 1894. He had wide experience in engineering work with many companies, including the Nordberg Co., Westinghouse Electric & Mfg. Co., the Stanley Co., and the Submarine Boat Corp. in this country, and the Crocker-Wheeler Co. in Canada.

He left his position as chief engineer of the Crocker-Wheeler Co. to get into the young refrigeration industry with Nizer Corp., one of the pioneer firms.

Emergency Measures Become Significant To the Industry

New Plant Construction Tendency Is To Windowless, Air Conditioned Buildings

DETROIT—Blackouts—so familiar to many sections of war-torn Europe—will never be necessary in airplane and motor plants now under construction in several parts of the country. The new buildings will be windowless, and equipped with complete air conditioning.

Huge motor plants being built by the Ford Motor Co. at the River Rouge and by Packard Motor Car Co. near Detroit will be windowless, air cooled buildings. The latter will require an air conditioning system of approximately 1,000 tons refrigeration capacity.

At Buffalo, plans for an \$18,000,000 plant for Curtiss-Wright Corp. now under consideration call for the type

of building that will not emit light to guide an enemy bomber. Like the others, the factory will require an air conditioning system of enormous output.

The proposed Curtiss plant will build dive bombers and will consist of three buildings—the manufacturing plant, an engineering building, and an office building. The three buildings will cover over 1,000,000 sq. ft. of floor space.

A recent report from Inglewood, Calif., discloses that the North American Aviation Co. will soon break ground for a \$7,000,000 windowless factory at Dallas, Tex., where another large air conditioning system will be installed.

Courts To Curb Abuse of Law Postponing Instalment Payments

WASHINGTON, D. C.—Important to appliance dealers and other retailers selling merchandise on time payments are provisions of the Soldiers' and Sailors' Civil Relief Act of 1940, recently passed by Congress, which provides a moratorium on instalment payment contracts for men between the ages of 21 and 35 who are called to military service under the recently enacted conscription law.

Although the relief act protects all those called to the colors under conscription, it also seeks to make the consequent result of the moratorium on credit grantors as light as possible, and permits them redress in cases of abuse.

The Act specifically provides that where an instalment contract has been entered, a down payment has been made, and the purchaser subsequently called to the colors, the credit grantor may not ordinarily terminate the contract or repossess despite the fact that instalments are not met. However, it is provided that the credit grantor can seek court action. The assumption from this is that where the exemption is being misused, the court will decree the payment to be made.

An important provision of the law, as far as credit grantors are concerned, is that the instalment

(Concluded on Page 2, Column 3)

A.S.R.E. May Form Kelvinator Combines Two New Chapters Commercial, Parts & Service Sales Depts.

NEW YORK CITY—Meetings of refrigeration men looking toward the organization of chapters of American Society of Refrigerating Engineers will be held during October in Cleveland and Kansas City, A.S.R.E. headquarters here reports.

Cleveland meeting will be held Oct. 8 at the Statler hotel, with cocktails and a dinner preceding the business meeting at 8 p.m. L. L. Lewis, vice president of Carrier Corp. and an A.S.R.E. vice president, will be chairman of the meeting. John Schurman, of York Ice Machinery Corp., will talk on "Refrigeration and the Cleveland Code," and Martin R. Carpenter, consultant on ice rinks, will discuss skating rink construction and give details of some of the large jobs he has supervised recently. Open discussion will follow the talks.

A. M. Fenwick is serving as temporary secretary of the Cleveland section.

(Concluded on Page 16, Column 1)

Cecil Boling Appointed Eastern Agent For Bush

HARTFORD, Conn.—Appointment of the Cecil Boling Co., 415 Lexington Ave., New York City, as exclusive manufacturers' sales agent for Bush Mfg. Co. products in the eastern territory has been announced by J. W. Hatch, president of Bush Mfg. Co.

Cecil Boling, who heads the new sales agency, for the past six and one-half years was with Melchior, Armstrong, Dessau Co., Ridgefield, N. J., wholesale distributor of refrigeration, air conditioning, and heating

(Concluded on Page 12, Column 4)

Lyle-Crenshaw Is Norge Memphis Distributor

MEMPHIS, Tenn.—Lyle-Crenshaw, Inc., has replaced Wayne Spinks Co. as distributor of Norge refrigerators and major appliances in this territory.

C. H. Irion, sales manager of Norge products in the Spinks distributorship, will continue in that capacity with Lyle-Crenshaw.

The Spinks organization will continue as an appliance distributor, concentrating for the present on Bendix home laundry equipment.

'Contract Service' Speakers & Sessions Eyed In Dallas Set For Rema Meet At French Lick

DALLAS, Tex.—Local refrigeration service engineers are watching with interest efforts being made here to establish two refrigeration service companies who will do service work strictly on a "maintenance contract" basis.

It is said that provisions of the contracts offered by these companies stipulate that not only shall all required service work be furnished, but that whatever replacements are necessary shall be included in the contract price.

The companies are declared to have been formed by men who have not been in the service business in Texas for a particularly long time.

Charge being made for this work ranges from \$1.50 to \$2 monthly.

Knoxville Average Price \$144 During August

KNOXVILLE, Tenn. — Appliance dealers here sold a total of 408 refrigerators during August, with an average sales price of \$144. Total sales value for electrical appliances sold during the month was \$168,339. Sales totals for the month were:

	Units Sold	Average Price
Refrigerators	408	\$144
Ranges	187	145
Water Heaters	55	80
Washers	225	78
Ironers	5	68
Roasters and Cookers	76	4
Dishwashers	2	200
Vacuum Cleaners	107	67
Radios	632	35
Ventilating Systems	4	125

Commercial sales for the month included 12 ventilating systems, one air conditioning unit, 11 refrigerators, and four ranges. Average sales price for refrigerators was \$600.

James & Co. Cashes In on Interest In Aviation



St. Louis G-E dealers took to the skyways in getting their fall electric range campaign under way. At left: J. R. Poteat, G-E range division manager, arriving by plane, is greeted by R. L. Hughes, right, and Robert Brenner of James & Co. At right: Miss Margaret Mellon, "Miss America of Aviation," who will demonstrate airliner food preparation as a cooking school feature.

Buhl To Distribute Crosley In Detroit

DETROIT—Buhl & Sons Co. has been appointed distributor of Crosley products in Detroit.

Buhl & Sons is one of the oldest hardware and appliance distributors in the United States, and is among the largest institutions of its kind in the country.

The merchandising of Crosley products of Buhl will be in charge of Jack Morey.

McIver, Maxon Executive, Dies At Forrest Hills

NEW YORK CITY—John Wesley McIver, 46, advertising executive associated with Maxon, Inc., where he was in charge of the General Electric advertising account, died Sept. 24 at his home in Forrest Hills, Queens. He had previously been employed by the General Electric Co. just after the World War.

Program Completed For Rema Meeting

(Concluded from Page 1, Column 5)
to action on committee reports. No meetings have been scheduled for the afternoon. Rema members and guests will reassemble at 7 p.m. for their fall banquet meeting.

Friday forenoon program will be opened by an address on "Requisites for Success in a Jobbing Business," by J. W. Baillie, secretary-treasurer of Detroit Lubricator Co. and chairman of the association's credit managers' division. Second address of the session, on "Cold Facts and Hot Ideas—What Advertising Can Do for You," will be presented by Stuart G. Phillips, advertising manager of Dole Valve Co., Chicago.

An important question scheduled for action at the meeting has to do with selection of a place and date for the Fourth All-Industry Refrigeration and Air Conditioning Exhibition. Next year's show, the Third All-Industry Exhibition, will be held in the Stevens hotel, Chicago, on Jan. 13-16, 1941.

Instead of waiting until next January to take up the matter of the time and place for the following year's show, Rema directors have decided to open the matter for advance discussion and decision by the entire membership.

Questions to be settled in connection with the show's future course include whether the event should be held annually or every other year; whether it should be rotated or held permanently in one central location, as at present; and whether or not the show and conventions meeting concurrently with it should continue to be kept as close together as possible.

Meetings of the following Rema committees have been scheduled in connection with the meeting:

Jobbers Relations Committee: Chairman, J. S. Forbes, Superior Valve & Fittings Co.; F. J. Hood, Anslu Chemical Co.; and K. B. Thorndike, Detroit Lubricator Co.

Membership Committee: Chairman, M. R. Oberholzer, L. H. Gilmer Co.; Ivan Corcoran, Square D Co.; H. A. Chandler, McIntire Connector Co.; T. C. Davis, Dayton Rubber Mfg. Co.; and R. O. White, Day & Night Mfg. Co.



THOMAS A. FARRELL
who heads the new Kelvinator commercial refrigeration equipment, parts, and service division.

R.S.E.S. Relations Committee: Chairman, John Wyllie, Jr., Temprite Products Corp.; K. M. Newcum, Superior Valve & Fittings Co.; and H. W. McPherson, Electromatic Corp.

Trade Practices Committee: Chairman, W. C. Allen, Modern Equipment Corp.; L. F. Blough, White-Rodgers Electric Co.; R. W. Kritzer, Peerless of America, Inc.; Robert LeBaron, Virginia Smelting Co.; and J. A. Strachan, Kerotest Mfg. Co.

Statistics & Standards Committee: Chairman, Ivan Corcoran, Square D Co.; C. M. Brown, Tecumseh Products Co.; W. D. Keefe, Fedders Mfg. Co.; Robert LeBaron, Virginia Smelting Co.; A. B. Schellenberg, Alco Valve Co.; and A. B. Newton, Minneapolis-Honeywell Regulator Co.

Exhibition Committee: Chairman, M. W. Knight, Peerless of America, Inc.; C. H. Benson, Imperial Brass Mfg. Co.; D. H. Daskal, Perfection Refrigeration Parts Co.; R. H. Luscombe, Penn Electric Switch Co.; and K. B. Thorndike, Detroit Lubricator Co.

Registration Committee: Chairman, Barrett Scudder, Jas. P. Marsh Corp.; J. W. Hatch, Bush Mfg. Co.; and A. J. Male, Bonney Forge & Tool Works.

A.S.R.E. Relations Committee: Chairman, A. B. Schellenberg, Alco Valve Co.; E. W. McGovern, E. I. du Pont de Nemours & Co., Inc.; F. L. Riffin, Jr., Mueller Brass Co.

Details on Conscripts' 'Time Sales' Relief

(Concluded from Page 1, Column 5)
contract of a draftee may be altered or cancelled without court action if both parties or their assignees agree in writing. In the case of an instalment contract broken before the purchaser was called for service, the courts are granted the right to stay legal action if, in their opinion, this is desirable. This, in effect, gives a court the right to make the Soldiers' and Sailors' Civil Relief Act retroactive in deserving cases.

Other points in the law of particular interest to retailers include the following:

1. Where the law postpones a conscript's obligation, his guarantors are similarly protected.

2. Henceforth, in all civil actions, if the defendant fails to appear, the plaintiff, in order to secure a judgment by default, must first present an affidavit showing the defendant is not in military service. If the defendant is in military service, no judgment shall be entered without court order, and no order shall be issued by the court, until an attorney has been appointed to represent the man's interest, and no attorney so appointed shall have the power to waive any rights of the person so represented nor to bind him by his acts. Actually this gives the conscript the right to re-open the case in which he has been so represented, if he can show that his interests were not properly protected.

3. The court, in its own discretion, may stay any action in which a person in military service is plaintiff or defendant if, in the court's opinion, the conscript's military service affects his ability to conduct his case.

4. The plaintiff may, with the court's permission, proceed against a co-defendant of a person in military service.

5. If a seller has violated the provisions of this Act as to repossession, thereby rendering himself subject to a misdemeanor action, in the prosecution of this action the court may make such disposition of the case as is equitable to conserve the interests of all parties, e.g., order repayment of instalments or deposits, order a stay of the entire proceedings, etc.

6. The law does not apply to contracts made with individuals already in the armed forces at the time the contract is signed.

7. No special clause which a credit grantor might insert in the contract will serve to nullify the law. An instalment debtor who is subsequently drafted will receive the full protection of this law regardless of what his instalment contract says.

Basso Opens New Store

MILWAUKEE — Joe Basso has opened Basso Electrical Sales at 2567 S. Delaware Ave. here, with a line of electrical appliances.

THE COLD CANVASS

—By B. T. Umor—

Bill Grunow Back In 'Parts' Business

William C. "Bill" Grunow, once a power in the refrigeration industry, is still very active in the parts business. The chicken "parts" business. Owner of the million-dollar Val-Lo-Will farms on Lake Geneva, Wis., Bill now has six stores in Chicago selling nothing but cut-up chickens. He started with one store in March, and now sells 10,000 birds a week. The production will be stepped up to 20,000 birds in January.

Bill is appealing to those long-suffering chicken eaters who had their palates all primed for a leg or a piece of white meat only to have the "boarding-house reach" beat them to the platter. At Bill's stores the customer can buy all white meat, all drum-sticks, or whatever.

Advertising plays up this angle with the catchline "When You're Hungry for a Pork Chop You Don't Buy a Pig—Why Buy a Whole Chicken When It's Breast of Chicken You Want?"

And Bill hasn't forgotten what he learned about cooling benefits, either. His prize birds are readied for the kill in air conditioned rooms.

Jernberg Has Writer's Cramp—In His Leg

Mill's Jerry Jernberg is creating quite a stir with his broken leg. Nate Gross, "The Chicago Herald-American's" Winchell, says that Jerry's plaster cast is beginning to resemble the sidewalk in front of Grauman's Chinese Theater in Hollywood, with Mills dealers in the "Shake a Leg" campaign penning their names on Jerry's cast.

Here's Your 'Most Stubborn Man,' Lou Holtz

Credit refrigeration with another assist in foiling a hold-up. Two bandits walked into a beer store with robbery in mind.

"Put up your hands," yelled one of the bandits.

"I won't do it," said the store owner.

"If you don't get into that refrigerator, I'll shoot," countered the bandit.

"I won't do it," came back the stubborn victim, "it's too cold in there."

"Well, hand over your cash!"

"I won't do it," comes back the beer peddler.

The bandits looked at the store owner, looked at the refrigerator, looked at each other.

"Aw, nuts," one of them said. They ran out, jumped into an automobile, and drove away, cursing stubborn store owners and modern refrigeration methods.

Hailstones Unfair To Refrigerator Salesmen

Electric refrigerator salesmen out in McCook, Neb. are crying "unfair competition" this year on account of a freak of nature.

Way back in July a heavy fall of hailstones created a vein of natural refrigeration that local farmers are still mining to use in their refrigerators. The hailstones piled up on a creek bank to the depth of 12 or 13 feet, were covered with trash from a flood, and melted very slowly. Until the bumper crop is harvested, it's "time out" for appliance salesmen.

She Could Always Throw Ice Cubes

A Detroit woman was picked up and slapped in the jailhouse recently when the coppers found her guilty of carrying concealed weapons. The hidden mayhem tool was, of all things, an ice pick.

Some smart electric refrigerator salesman with legal leanings might promise to "spring her" if she puts her name on a sales contract before sentence is passed.

Get Ready To Duck, Boys

U. S. Housing Authority engineers have gone to bat on the problem of air raid shelters for inclusion in low-rent housing projects. The types studied are "pill box" affairs that will shed bombs much better than the reinforced cellars used in Europe with a very low "batting average."

Speaking of bomb shelters, we suppose you have heard the one that's going the rounds in England about the blond charmer who was waiting out the air raid in a dark shelter. Says the blond—"Take your dirty hand off my knee. No, not you. YOU."

Misinformation, Please

Things He Never Knew 'Til Now Department—

E. V. Durling, syndicated newspaper columnist who dishes up gossip and little-known facts for his readers, missed fire recently when he wrote wondering why an air conditioned automobile had never been put on the market. Fact-finder Durling also put in a bid for an air conditioned telephone booth.

We got busy and put him straight on the two counts with the hope that he will pass the information on to his readers—if some of them haven't heard the good news. We also suggested that Mr. Durling enter his subscription to the NEWS.

1899



CAPTAIN BILLY KNEW SULPHUR DIOXIDE BEFORE THE REFRIGERATION INDUSTRY WORE ROMPERS

"Capt. Billy" could tell you the whole dramatic story about SULPHUR DIOXIDE—how it grew from a lowly, smelter by-product to one of the industry's important refrigerants.

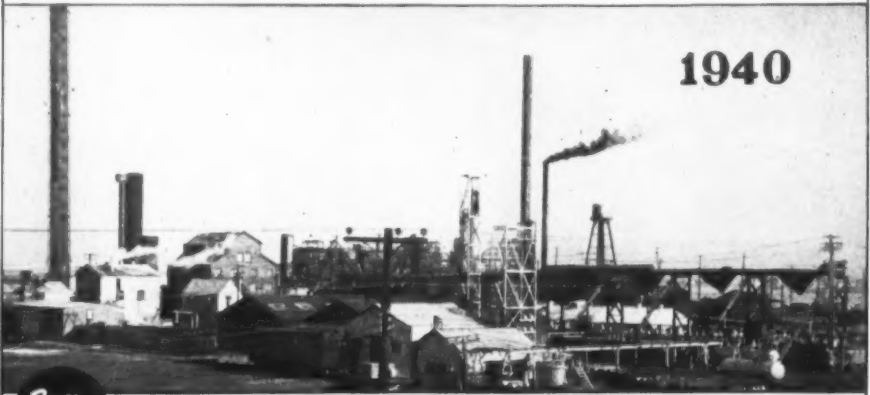
Capt. Billy has worked with the Virginia Smelting Company since 1899, the year of its founding.

It is men like him—men of experience and long service—who stand behind the quality of Virginia Refrigerants.



W. T. (Capt. Billy) GILCHRIST

1940



Buy your KINETIC'S FREON-12[®] VIA VIRGINIA
A POPULAR LINE OF LOW-PRESSURE REFRIGERANTS
EXTRA DRY ESOTOL • V-METH-L • METHYLENE CHLORIDE
VIRGINIA SMELTING COMPANY
At tidewater, WEST NORFOLK, VIRGINIA



A Complete Line Fast Moving into Dominance



A Size and Type of Condensing Unit to Fit Every Need

Mills Novelty Company, 4100 Fullerton Avenue, Chicago, Illinois

Fernald Offers Data Showing Export Sales Outside S. America

OMAHA, Neb.—Despite the war, a great deal of export business for American industries exists in countries other than South America, in the opinion of J. M. Fernald, general manager of Baker Ice Machine Co.

During July, 66% of the refrigeration equipment exported by Baker went to Asia, Mr. Fernald said. Total U. S. exports to Asia in July were 47% greater in dollar volume than those to South America, he added.

Export executives are becoming increasingly concerned over the growing opinion that South America is the "only source of United States export trade," he declared, whereas export figures show that other world markets are still active.

Of Baker's exports for the first eight months of this year, 59% went to countries outside Latin-America, Mr. Fernald said. These figures indicate that the opinion that trade to other countries has been minimized is erroneous, he pointed out. The value of our exports to South America, however, should not be underestimated, he cautioned.

Exports of refrigerating equipment to South America in July represented only 23% of total U. S. exports, after eliminating shipments to Canada and Great Britain, he pointed out. All of Latin-America received 37% of the country's exports in that month.

Opinion among exporters is that great possibilities for future export business exist in the British West Indies, British Empire, the French colonies, and China, Mr. Fernald stated. In July, exports to Netherlands East Indies increased 100% over 1939, exports to Finland increased 60%, and those to China 90%, he said.

G-E Gets a Contract From Government - - -

HARTFORD, Conn.—General Electric, through Orkil Electric Co., local distributor, has been awarded the contract, at \$22,032, to furnish 380 refrigerators for Hartford's first two low-renter housing projects, Nelson Court and Dutch Point Colony. Contract was awarded by the Hartford Housing Authority, and is subject to approval by U. S. Housing Authority.

- - So Does Frigidaire

LOS ANGELES—Frigidaire division of General Motors Corp. was low bidder, with \$35,686.66, for furnishing and installing 611 refrigerators in the Ramona Gardens low-renter housing project now under construction at Ramona Blvd. and Murchison St. here.

Frigidaire Products In Waldorf-Astoria Show

NEW YORK CITY—Continuing an annual custom, Frigidaire will show electric refrigerators and ranges as a part of the General Motors exhibit in the Waldorf-Astoria during the week of the New York automobile show, Oct. 12 to 20. Refrigerators and ranges to be shown will be current 1940 models.

Occupying the entire east and south balcony of the Waldorf ballroom, Frigidaire's exhibit will consist of a showing of 18 refrigerators and seven range models. Walls of the balcony will be lined with a background of maroon suede cloth. Appliances will rest both on individual pedestals, behind which will be panels of gold shaded glass, and at regular intervals on the floor, with a maroon background.

Westinghouse Shifts NBC Radio Program

NEW YORK CITY—Westinghouse Electric & Mfg. Co. will shift its "Musical Americana" program from the NBC Blue network to the Red network effective Thursday, Oct. 10. The program will be heard from 10:30 to 11:00 p.m., E.S.T.

Electric Kitchen Makes Eating of Meals on the Stage a Pleasure

Has a Supporting Role In 'Life With Father'

CHICAGO—You won't see it on the stage, but an all-electric kitchen is playing an important "supporting" role in the behind-the-scenes success of the play, "Life With Father," starring Percy Warram and Lillian Gish, now in its eighth month here.

Depicting life in the elegant '80's, much of the play is built around the breakfast table—and it is here, in a completely equipped kitchen just off-stage, that James W. Sutcliffe, property manager, prepares all of the meals served during the performance.

Kitchen equipment includes a sink and electric range and refrigerator, installed by Commonwealth Edison Co. especially for this play. It is believed to be the first complete kitchen ever installed for such a purpose.

In most plays, food to be served is sent in from nearby hotels or restaurants. However, anyone who has seen the play or read Clarence Day's "Life With Father," from which it is adapted, knows "father's" capacity and thunderous demands for service, and can well understand why efficient preparation of meals is essential.

Mr. Sutcliffe insisted on the complete kitchen after he had struggled through meal preparation on a two-burner electric plate while the company played in Baltimore. He does all of the cooking himself.

The menus call for bacon and eggs for breakfast in the first and second acts, and fried kippers in the third, coffee and cereal, and tea and cakes when the rector calls. Altogether, the play's grocery bill runs to about \$25 a week.

Mr. Sutcliffe is on hand well ahead of each performance to fry the bacon, toast the bread in his electric toaster, and boil water for coffee and tea. The "scrambled eggs," Mr. Sutcliffe confides in a stage whisper, are really chopped apricots in disguise. One scene before the third act breakfast, climax of the play, he fries his "kippers"—in this case, bananas fried in a pound of butter, to brown them properly. It's the electric range, Mr. Sutcliffe says, that really helps in accomplishing this feat, in which speed is essential.

He also counts his electric refrigerator as indispensable to the play's success in a culinary capacity. Ice cubes are required to keep the cubes of butter intact under hot stage lights, as well as to supply ice water for the thirsty cast, who are done up in heavy clothing throughout the performance.

The refrigerator also is essential for storage, since Mr. Sutcliffe's daily marketing includes six oranges, two quarts of milk, a pound of butter, a pound of bacon, a half dozen bananas, and lemons for tea.

Hook Opens Own Store In New Orleans

NEW ORLEANS—Handling a full line of Crosley refrigerators, Southern Furniture Co., headed by Anthony Hook, has opened for business at 1732 Toledano St.

Mr. Hook formerly was manager of Kirschman Furniture Co. and has been in the furniture business since 1903. His store is in a semi-commercial neighborhood, near a large area of medium income residences. He already has purchased adjoining property for expansion.

Norge 'Housewarms' New Quarters In Boston

BOSTON—Celebrating its recent move to a new location at 724 Beacon St., Norge Sales Corp., distributor in this territory, has been host to dealers and salesmen during a recent "house-warming" period.

In attendance during the house-warming period were C. H. MacMahon, general manager; L. T. Maloney, sales manager; Van Duncan, regional district manager; Frank Moore, regional district manager; William Davis, office manager; Edward Morris, service manager; Walter Clark, shipping-parts manager; and Edward Harney, shop superintendent.



Lillian Gish and Percy Warram, who play the leading roles in the Chicago production of "Life With Father," get a back stage cup of tea made in the all-electric kitchen installed especially for the play's run. They are being served by James W. Sutcliffe, property master, who also serves as the cook for the play. Formerly, when food was part of the property for a play, it was brought from nearby restaurants.

Richards & Conover Branch Adds New Lines

OKLAHOMA CITY, Okla.—Richards & Conover Hardware Co.'s branch here has recently added distribution of Mayflower electric refrigerators, Odin and Globe ranges, and Leahy evaporative coolers to its appliance lines.

Kelvinator In N. Carolina Chain of Stores

HENDERSON, N. C.—Economy Auto Supply Co.'s local store, operated by E. C. Mitchner, recently took on the complete Kelvinator appliance line. Shortly afterward, so did the Economy stores in Louisville, Warrenton, and Oxford.

Guthright's Opens New Pine Bluff Quarters

PINE BLUFF, Ark.—Guthright Sales Co. recently moved into a new, modern building at Third and Pine Sts. here. Featured lines are Westinghouse ranges and refrigerators, Bendix home laundry, and a line of attic fans and furnaces.

All right, let's suppose your next prospect IS an Eskimo...



YOU SAY:

"... but isn't it true, Mrs. Igloo, that your kitchen *does* get hot and stuffy?"

"Ug-lug. You betcha. When me cookum blubber stew, even little Nanook say 'phew'!"

"And isn't it true your present refrigerator is all dull and spotty from blubber grease and whale oil smoke?"

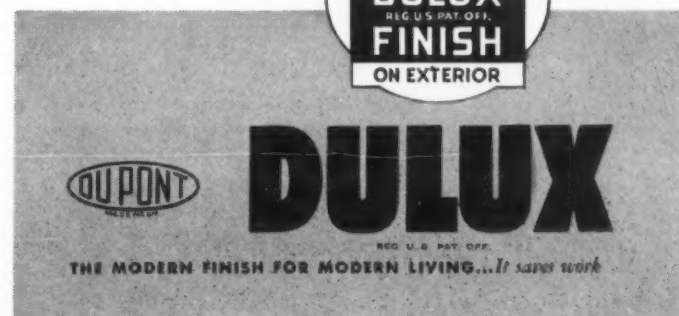
"Um-yum. Even Aurora Bora Super Soap no getum clean and white. Very bad... very bad."

"And *that*, Mrs. Igloo, is just the reason why you should buy this new refrigerator. It has a Du Pont DULUX finish."

"Well, harpoon my husband! Why didn't you say so? Load it on my sleigh right now... we're heading North tonight!"



► DULUX is one of the finest "extras" that ever helped clinch a sale. It clicks with customers because it has every quality women want—snowy whiteness, spot resistance, rugged durability, ease of cleaning. That's why so many salesmen find it *pays* to mention DULUX—Made by Du Pont—early and often in every sales talk. It *pays*... because it helps sell refrigerators *faster*. E. I. du Pont de Nemours & Co. (Inc.), Finishes Division, Wilmington, Delaware.



Fair and Cooler

The Pen Is Mightier . . .

Members of the NEWS staff often eat lunch at Kruse's Restaurant, just a block from the office. Entering a hot, stuffy room after spending the morning in an air cooled office caused loud laments to arise from "Zeke" Carithers, and others on the staff.

After pointed remarks reached the ears of Mr. Kruse over a period of many weeks, two self-contained store cooling units were purchased from Westerlin & Campbell, local York representative. The salesman still wonders why that order just "fell off the bush."

Straightway Mr. Kruse received a letter from Joe Rosenmiller of York, congratulating him on his forward step. York also supplied handout and mail pieces with the Kruse's Restaurant imprint.

Note to sales promotion executives: That letter from Joe Rosenmiller is getting dog-eared from being shown to every customer who comes in—even for a sandwich.

Advertisements Are 'News'

Air conditioning is being promoted in a series of news type advertisements appearing in Time, Business Week, and other national magazines.

Owens-Corning Fibreglas Co. is broadening the market for its "Dustop" filters by increasing the public interest in air conditioning systems.

The advertisements use news type photographs of air cooled restaurants, dress shops, homes, and hospitals. Copy stresses the importance of clean air.

No 'Hot' Dogs Here

People will not have to feel sorry for puppies kept in the windows of several Nashville, Tenn. pet shops since G. L. Winstead of the Jackson Electric Service convinced several owners that air conditioning was essential to the health and comfort of animals kept on display.

The sales drive is being extended to animal hospitals.

Farm Market Note

Air-Rite Corp. of Dallas recently installed a ¾-ton room cooler in the Denton, Tex. home of Thomas Bolton, local representative of the U. S. Department of Agriculture.

Sad, Sad, Story

A voluntary petition in bankruptcy has been filed by the John T. Fuchs heating and air conditioning company of Buffalo.

Liabilities were listed as \$27,000 and assets at \$56.

Tale of the Yukon

C. A. Pangborn, who covers Alaska for the Seattle Plumbing Supply Co., G-E air conditioning distributor, thinks engineers figuring heat gains and losses in ordinary climates have a cinch. Mr. Pangborn has to deal with temperatures ranging from 75° below zero to summer temperatures of 100° F.

As if that were not bad enough, calculations must be corrected for a 60-mile-an-hour gale instead of the usual 15 mile wind. Mr. Pangborn's efforts are also hampered by the fact that no sun-effect tables are available for the intensity of the midnight sun.

Baltimore Candy Firm Using 25-hp. System

BALTIMORE—Chocolate dipping and packing departments of the Lipps Candy Co. have been air conditioned by a 25-hp. York system installed by R. H. Bozman & Bros.

G. T. Maynard, Jr., vice president of the candy company, states that the system has provided comfortable working conditions for employees, efficiency in operation, and a saving in materials used in manufacturing.

Attic Fan Bids Asked

DALLAS, Tex.—Bids have been called for by C. C. Bryan, Dallas, for installation of attic ventilation to serve 20 apartments to be housed in a new building here. Bids for service refrigeration in the 20 efficiency apartments will be called under separate contract.

60-Ton Cooling System Makes New College Library 'Most Popular' At Summer School

CHENEY, Wash.—Summer school students at the Eastern Washington College of Education have enjoyed relief from the hot, dry climate of this region since air conditioning was installed in the school's new library. With a 60-ton cooling system in operation, it has become the most popular building on the campus.

Designed and installed by Zahnizer & Warren Co., heating and ventilating contractors of Spokane, the air conditioning plant is a conventional central plant system, using General Electric equipment, but it has several features which assure comfortable air temperatures and economical compressor operation.

No air is recirculated, the system being designed for 100% fresh air. This prevents any possibility of odor concentrations and is practical only because the climate in this section is always dry, hence the air conditioning equipment can devote its whole energy to cooling alone, rather than to both cooling and dehumidification.

Because exceptionally cold water from the college wells is available, the 40-hp. condensing unit attains the unusual capacity of 60 tons of refrigeration. The compressor is arranged to run continuously, being modulated for operation either at one-quarter, one-half, or full capacity. The system is equipped with automatic increase to full capacity if the cooling load requires it, and automatic capacity reduction when the load decreases.

This arrangement solved what was a decided design problem—starting the compressor without noticeable flickering of lights on the single

combination light and power circuit which serves the library.

Finally, the temperature of the air supplied to rooms of the library is modulated by a master room thermostat which controls throttling type refrigerant expansion valves on the coils. This method of gearing the air discharge temperature directly to the cooling requirements of the building assures a steady, smooth temperature of air distributed through the rooms, completely independent of compressor operation.

Three-step capacity control of the compressor was secured by employing a two-speed motor and a 50% bypass on the compressor which cuts out half of the compressor cylinders as needed.

The compressor starts as one-quarter capacity (half of the cylinders bypassed) with the motor running at half-speed. A time-delay relay holds the machine at one-quarter capacity for a few seconds, and then if more capacity is called for, the motor steps up to full speed. This second stage of operation provides half capacity, as only half of the compressor cylinders are active. If still more refrigeration is needed, the bypass closes automatically and the machine produces its full capacity output.

The compressor is a General Electric V8-cylinder machine with a 40-hp. two-speed motor. It serves five G-E direct-expansion coils installed in a plenum chamber in the basement, from which a 24,000 c.f.m. centrifugal fan distributes the conditioned air throughout the library. A second fan exhausts "used" air.

\$12,000 Cooling System For Texas Store

DENTON, Tex.—Air conditioning was installed in the H. M. Russell & Sons department store here recently at a cost of approximately \$12,000. The installation, using a York "W" type compressor, was made by the Dallas Air Conditioning Co., Inc., under the supervision of James H. McDowell.

The central-station system uses an evaporative condenser for the conservation of water.

Powered By Natural Gas

JACKSON, Miss.—Power to drive the 25-ton air conditioning system recently installed in the Black & White department store here is supplied by a Buda natural gas engine.

Two Carrier duplex compressors were installed by Air Conditioning, Inc. of this city.

Hotel Garage Cooled

DALLAS, Tex.—Offices, rest rooms, and waiting rooms of the new \$200,000 garage to serve the Hotel Adolphus here will be air conditioned, it was announced by J. A. Pitzinger and Roy E. Lane, architects.

'Open Door' Policy At Casino Taxes Cooling

RENO, Nev.—Four large doors standing open 24 hours a day, and several hundred people crowding around the gaming tables of the enlarged Palace Club here, place an unusual demand on the 25-ton Westinghouse air conditioning system recently installed by Saviers & Sons.

The usual air input is doubled by a twin blower system, and in addition a 5,000 c.f.m. exhaust fan is employed to keep the casino clear of smoke.

Other recent Westinghouse installations in Reno include Colbrandt's bar, the Dog House, Waldorf Club, Farley's Cocktail Lounge, Rainbow bingo parlor, and the El Patio ballroom.

Carrier self-contained units were recently installed in the Harris Club and the 116 Club. Many other "package" air conditioning installations have been made in cafes and bars here.

Funeral Home Installs Three Package Coolers

DALLAS, Tex.—Three package-type Airtemp air conditioning units, two 5 ton and one 3 ton, have been installed in the Ed C. Smith funeral home by the Air-Rite Corp.

War Keeps Europeans In India; Cooling Sales Increased

CALCUTTA, India—Room coolers have been selling in large numbers here and there has been a general increase in the demand for air conditioning, chiefly because Europeans who would ordinarily go on vacation are remaining here for the duration of the war. Imports of equipment have nearly doubled.

The American Consulate reports that in the industrial and commercial fields, increased earnings and the passage of the Excise Profits Tax have accounted for an increased demand for air conditioning equipment.

Because of the heavy demand placed on air cooling equipment by the torrid and tropical climate, there is a brisk demand for properly trained service men. Several American concerns are now represented here, but a shortage of service men is reported.

So far there have been no quota systems or restrictions on the sale of air conditioning, but if the war is prolonged, certain measures will be adopted along these lines, it is believed.

Until recently, the government had been charging 30% ad valorem duty for several months on all items of air conditioning, except those which were identified for use in the manufacture of ice.

Recently, however, several bodies made representations to the government, which have resulted in the original duty of 10% being applied to all air conditioning equipment, including portable room coolers.

Such items as grilles, accessories, tubing, and other things not readily identified as material for exclusive use in air conditioning installations were retained in their original categories, and carry a duty of 25 or 30%.

Air conditioning firms here are all busy, but some are being handicapped by the failure of American firms to meet delivery dates. All are of the opinion that business will be good as long as the war lasts, the American Consulate reports.

New Westinghouse Bldg. To Have All-Year System

PHILADELPHIA—Construction of a new three-story office building, as a part of a \$500,000 expansion program, to accommodate 700 Westinghouse office workers at the company's steam turbine plant near here, is now under way. To be of stone and brick construction, the new building will have 110,000 square feet of floor space and will be completed in November.

A refrigeration system, also used to provide heat in cool weather, will maintain a uniform temperature the year around. A Westinghouse Precipitron will be used to rid the air of dust, germs, pollen, and soot by an electrostatic process. Topping these new methods of climate control will be a 2-inch deep pond on the roof to absorb the sun's heat on hot days and act as insulation for the building.

A design of windows which will include double panes of glass inset in the larger windows has been specified. Though more than half the periphery of the building will be of glass, a new 4-foot tubular lamp recently announced by Westinghouse will be used to provide 35 lumens of light on the desks as compared to 15 lumens, the present average.

Included in the new building will be an auditorium for assemblies, seating 350 persons, and a cafeteria for all employees, capable of serving 600 persons at a time.

COSTS LESS
in the long run!

DAVISON'S
SILICA GEL

THE FOOL-PROOF DRYING AGENT FOR REFRIGERANTS



Be your own efficiency expert and start cutting down your operating expenses right now by standardizing on Silica Gel—the quality drying agent. You'll find that its superior efficiency will actually save you money in time and material. Expensive "no-charge" service calls will be eliminated—you'll be able to forget about moisture troubles and freeze-ups forever. When you do a job—it's done—permanently—both you and your customer are pleased.

SILICA GEL HAS 1½ TO 2 TIMES
MORE CAPACITY • ACTS
INSTANTLY • REMOVES ACIDS
• DOES NOT CAKE OR POWDER

Join the thousands of "quality-conscious" service engineers and manufacturers who are cashing in on the advantages of Silica Gel. Order your favorite dryer charged with Silica Gel or get Silica Gel for refill from your jobber today!

For complete information see your jobber or write to

THE DAVISON CHEMICAL CORPORATION
Silica Gel Department
BALTIMORE, MARYLAND

WELD? NO!

Not with the
SQUARE D

CLASS 9110 REGULATOR

Urged for use at full name plate ratings. *It will carry the load!*

RATINGS

1 H.P. 110 Volts A.C.
1½ H.P. 220 Volts A.C.
½ H.P. 230 Volts D.C.

DO IT ALL WITH SQUARE D—SWITCH • PROTECT • REGULATE

SQUARE D COMPANY
REGULATOR DIVISION
DETROIT • MICHIGAN



WIPING
CONTACTS!
THAT'S
WHY!

Write
for
Bulletin

KERO TEST

Valves and Fittings

The Standard of the
Industry

Kerotest Manufacturing Co.
Pittsburgh, Pa.

'I Do the Craziest Things'

Harry Wasserman Tries Everything From Putting A Water Cooler on the Sidewalk To Giving Magazine Subscriptions With Each Sale

By Robert M. Price

TOLEDO—"I do the craziest things."

That's what Harry Wasserman, head of United Music Store, Westinghouse dealer here, has been telling the public for years. His appliance sales to this same public have proved that Mr. Wasserman is about as crazy as a learned fox in his business promotion ideas.

In the first six months of this year, for instance, the store had sold 450 electric refrigerators at an average price of \$158, according to Mr. Wasserman. Not such a "crazy" performance.

Mr. Wasserman is an idea man—and he uses his own particular brand of ideas. We writes all the store's eye-catching advertisements (in the "craziest things" manner), and still has time to direct his sales force along a planned route that he has mapped out as the shortest distance between sales.

His newspaper advertising is the big gun in his customer-catching attack. He keeps a huge file of this advertising and tabs the successful ideas. He can go back and incorporate some of these proved ideas in his current advertising blasts.

RULES FOR COPYWRITING

From his experience in writing advertising and watching its pulling force, Mr. Wasserman has laid down three main rules of successful copy writing.

First, the advertisement must stand out like an ailing thumb. Sure method, he says, is to use some catch-words that will bring the reader up short. His favorite, "I do the craziest things," is an example. A "2 for 1" sale is another.

Second, the advertisement must contain not more than 20 words. Put a real punch in these words, Mr. Wasserman advises. "Your prospective customers don't get paid for reading wordy advertisements," he added.

Third, the advertisement must carry a specific message to the buying public. Tell them how much you can save them on operating costs, for example. Direct appeals to labor, tie-ins with government housing plans, and combination offers are other good methods.

On every advertisement there is an identifying picture of Mr. Wasserman himself. Pictured with his ever-present pipe, "Harry," his store, and his "craziest things" messages have become mighty familiar to Toledo buyers.

OUT-OF-JOB PLAN

A few of the ideas he has used in the past are proof that he carries a wallop in his copy-writing hand. He was one of the first merchants in the country to hit on the scheme to defer payments when the customer lost his job. "I take care of you when you're out of work" was a message that looked mighty good during the leaner years not so long ago. The scheme was sure-fire, and very little money was lost in its operation, Mr. Wasserman says.

Purchasing on the FHA plan was played up this way. On one side of the advertisement lay-out was a picture of Uncle Sam. On the other side was Harry Wasserman, pointing to Uncle Sam. "He thought of it—I'm doing it," read the catch-line.

Another curiosity teasing broad-side read this way: "I do the craziest things, and this is the craziest thing I've ever done." The "craziest thing" was the offer of a refrigerator for 15 cents a day. Old stuff? Not the way Harry worked it. His offer was built around the catch-phrase "A nickel a meal you'll never feel." So he cashed in on the idea of "it ain't what you do, it's the way that you do it."

SOME OF THE CRAZY ONES

Then he hit on the idea of playing up operating cost of an electric refrigerator. This message stated: "If your operating cost on this refrigerator is over \$1 a month, I'll pay the bill." Not a dime was paid out on this offer, Mr. Wasserman re-



HARRY WASSERMAN

vealed, but it had very definite customer appeal.

One year he gave away magazine subscriptions on appliance sales. Hot weather didn't find him in a siesta mood. When the sun was the meanest, he put an electric water cooler out on the sidewalk in front of the store. The drinks were on Harry—and sales followed the drinks.

There is no lack of salesmen to follow up on this promotion. Mr. Wasserman has thousands of them plugging his merchandise. He figures it this way. "We have on our books," he explained, "over 30,000 accounts. The minute a person buys something from our store, that person becomes a salesman. We have an endless chain of users becoming salesmen." When these user-salesmen go to work, they are given special forms to relay tip-offs on prospects to regular salesmen. If the sale is closed, the user is paid a commission. Plenty of paying tips for the store flow in through this method, it is said.

CALL-BACK CARDS

When the sale is made, a call-back card is made out for the new user. The regular salesman calls on this user with two things in mind. First, he lists the appliances owned by the user, recording the age of each appliance with a thought toward future sales. Second, he lines up this user as a "salesman," and with a commission as bait, the user becomes a potential seller as well as a potential buyer.

A "pay" record is kept for each user. The monthly payments and the rate of pay regulate the salesman's call-backs to sell additional appliances. The pay record also acts as the salesman's protection on appliances sold to the user. As long as the user has not paid in full for the first appliance sold, the salesman gets first claim on this user. If another salesman sells this customer during this period, the first salesman collects a commission.

That is the only "protection" offered the salesmen. There are no set territories. Every salesman gets a free crack at any account, and it works out about even on the exchange of customers and "protective commissions."

Salesmen go through a regular training period. The tutor is Mr. Wasserman. "I want to train them my way to fit in with my advertising and promotion plans," he says.

SALESMEN RECITE

Training schools in the Wasserman manner are held two or three times a week. Each salesman tells his story of selling in a step-by-step recitation. The selling stories are told on a competitive basis. For the demonstration is 100 points. Listening salesmen act as the judges. The man with the highest score walks off with a cash prize, with the "losers" gaining valuable tips they can use on prospects.

Talking of salesmen and their ability to go out and get business: "I believe canvassing is still the backbone of this business, if it's done right, but it is usually a lot of lost motion," Mr. Wasserman says. "Salesmen don't like to go out 'cold.' I believe this makes a liar out of salesmen. I mean fake reports and excuses."

"Another thing. We don't pit one

salesman against the other in contests. Each man fights against his own quota. In that way they don't fold up and quit when they get behind the biggest producers.

"Advertising and promotion ideas that set up the prospects for sales are the salesman's best aids."

Weather Data Good Sales Ammunition To Houston Area Dealers

HOUSTON, Tex. — The weather man was a "cousin" to refrigerator salesmen in Houston last winter. For the six months beginning with October, 1939, and ending with March, 1940, there were only seven days when the temperature dropped below 50° F., setting up a very convincing argument for year-around electric refrigeration.

Salesmen did not go into hibernation in the winter months. Of the 14,078 electric refrigerators sold here in the 12 months ending with March, 1940, 5,431 were sold in the six months beginning with October and ending with March. This was 39% of the year's business.

The "fair weather" figures have been made into a series of advertisements by Houston Lighting & Power Co. to bring home to prospects (and to salesmen) that electric refrigeration is out of the seasonal class in this climate. The advertisements picture the calendar sheets of last winter's months with the days ringed which had a temperature below 50°. The tag line is "six lessons from last winter."

Hard-Working Hens Boost Oklahoma's Appliance Sales

OKLAHOMA CITY, Okla. — Rural customers of Oklahoma Gas & Electric Co. are cheering their hens on to greater egg-laying capacity these days, because every dozen eggs sold to produce outlets is good for 3 cents on the purchase of an electrical appliance.

The utility pays the bonus of 3 cents per dozen up to 500 dozen eggs sold, or a total of \$15, which can be applied to the purchase of an electric range, refrigerator, water heater, or pump from any dealer in the company territory.

Every rural customer in the utility's northern division is eligible to participate in the bonus plan, which began June 1 and continues for 12 months. The customer obtains a pass book from the utility's office and takes it with him when he delivers his eggs to his egg dealer. When the book shows the delivery of 500 dozen eggs, the customer is eligible to take it to his appliance dealer, who will credit him with \$15 on the purchase of any of the four appliances.

Only one bonus can be earned toward a single appliance, but as many as four bonuses of \$15 each can be applied if all four appliances are purchased.

The promotion was originated by Peoples Gas & Electric Co. of Mason City, Iowa, according to A. A. Brown, sales manager of Oklahoma Gas & Electric Co.

Bridge Offers Tips on Space Heater Sales And Installation

DETROIT—Tips on home heater merchandising, applicable by all dealers handling this type of equipment, have been given by Earl Bridge, manager of home heater sales for Norge. Shipments of Norge "Fastemp" heaters so far this year have nearly doubled the volume recorded in the same period of 1939, Mr. Bridge reports.

Following are some of Mr. Bridge's home heater selling highlights:

Start your sales effort early and give home heaters prominent display, even though the weather remains warm, to remind prospects that, as summer wanes, winter isn't far behind.

Canvass resort areas, tourist camps, filling stations, and rural schools. Use sporting goods dealers as "bird dogs." They know the men who might buy heaters for hunting and fishing lodges.

Check storage buildings and warehouses for home heater prospects.

On every sale, be sure the heater is properly installed by a competent man who realizes the importance of providing sufficient draft to obtain best results with heat producing fuel oil. Some dealers now are contracting their installations with heating specialists.

Above all, "don't send a boy." Better skip the deal entirely rather than make a purely price sale which leaves a 5,000-cu. ft. capacity unit trying to heat a 7,000-cu. ft. capacity home.

Famous Finishes



THE FINISH . . .

THE LAST OUT IN THE FINAL GAME OF THE WORLD'S SERIES

IS the Climax to a succession of breathless thrills

SYNTEX WHITE SYNTHETIC ENAMEL

is the climax to years of patient, scientific research for a perfect refrigerator finish

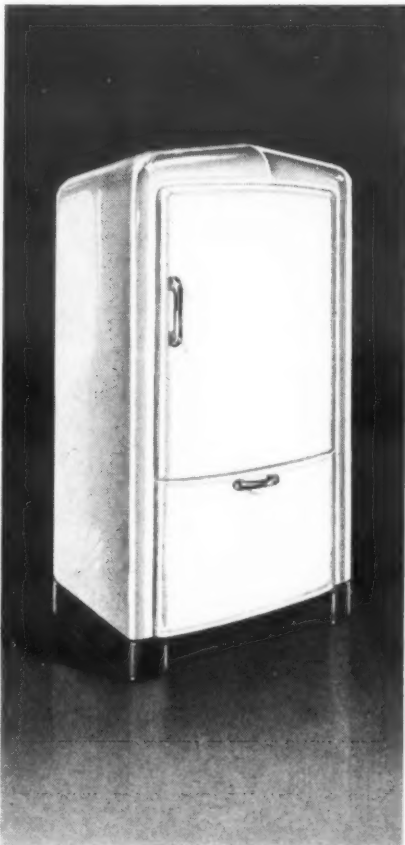
In more than 1,750,000 homes, refrigerators finished in Syntex White give daily testimony to its enduring beauty.

In many large manufacturing operations Syntex White is the standard finish. In others it is the safe alternate.

JONES-DABNEY CO.

Incorporated

SCIENTIFICALLY CONTROLLED INDUSTRIAL FINISHES
Factories at Detroit, Mich., Louisville, Ky., Malden, Mass.



Keeping 'Em Sold and Collecting —That's the Secret of Success In Beverage Cooler Business

Rozett Keeps Collections Separate From Sales, and Sees Lagging Accounts Himself

CHICAGO—Dealers in all parts of the country have watched—and in many cases copied—the technique of I. R. Rozett, general manager for Dessent Engineering Co. here—in the management of the big beverage cooling sales operation that the Dessent Co. does in the Chicago area.

It's not so much how he sells 'em, but how he keeps 'em sold that have made his methods so widely copied. For it is no secret that beverage coolers, especially now that they are being sold to the smaller or "on the fringe" type of business, are hard to keep sold. The obvious reason, of course, is the seasonal nature of the beverage cooling business.

Thus, in presenting the story of Mr. Rozett's success in selling beverage coolers, we're going to start at what would seem to be the end of the story—collections—and work backwards.

"I've never had to replevin a unit (a type of legal action where the article is taken forcibly from the man in possession of it), and I've never lost money on a repossession," is one of Mr. Rozett's proudest claims.

FIRST, THERE'S A SYSTEM

Yet, a greater feather in Mr. Rozett's cap is the fact that he has so few repossessions. Mr. Rozett credits two things for this accomplishment—a system for collections and keeping tabs on accounts, and the personal attention that he gives each account.

Collections are made by hired collectors—not by salesmen. "This runs our collection cost to about 2½% of total sales, but is worth it because it keeps losses down," says the general manager.

"Make the collections on the same day of the month each month. This

gets over the idea of regularity to the user," says Mr. Rozett.

"Follow a delinquency within a week after it occurs (never let it ride until the next month). Then follow every two days for the next week, and if no settlement is made, follow it every day until some action is taken."

To facilitate this kind of a follow-up, prepare and use a file numbered by the days of the month. Then each day will show up the names of the users who are to have paid that day—and when one doesn't, the name is moved up another five, six, or seven days, at which time the first follow-up effort will be made.

When a customer gets pretty well behind, throw in a 50 cent gear in the coin machine mechanism (25 cents a day being the normal rate of payment).

THEN, RULES FOR MANAGER

"Never let a repossession come back to headquarters until you've visited the man yourself," is Mr. Rozett's admonition to sales managers.

"Always write a personal letter—never a form letter—to accounts that get behind," is another rule for sales managers.

Does Mr. Rozett follow these rules himself? He does. About three days a week he grabs a handful of account cards, hops all over the city to see users who have fallen behind in their payments. Then he comes back to work nights with a dictaphone, writing letters to others.

"If you're the general manager, have your business card say 'GENERAL MANAGER' so that the user sees it quickly—and always give him your card," says Dessent's general manager. "People like to know that they are dealing with someone in authority."

Upshot of this policy is that Mr.

Rozett can produce a sheaf of letters from users—intimate, personal correspondence very evidently addressed to a man whom the writer regards as a friend. None of the "come-on-out-and-take-the-damned-thing-away" sort of letters that one has heard about in the beverage cooler business.

ANSWER TO 'COME AND GET IT'

What does the general manager do when the customer does write the fatal "come and get it, I can no longer pay" words? He sees the user at the first opportunity and impresses on him first, the fact that he had signed a contract knowingly, and must now suffer the consequences for not fulfilling it; second, and more important, that if the box is repossessed, the user loses everything.

Adjustments are made in payment plans, and the general manager does everything possible to see that his equipment stays on the user's floor.

"I'd rather conserve one sale than make three new ones," is the way Mr. Rozett puts it.

That about tells the story of how beverage cooler sales are conserved. The rental lease which the purchaser signs is reproduced on this page.

As to selling beverage coolers, the key is the salesman—and the proper administration of his activities. Mr. Rozett has a lot of ideas on the subject—a good many of which are at least unusual, if not original.

MEN OVER 50 WANTED

"Give me a man from 50 to 65 years of age, preferably," is one of his ideas. "I won't hire a man under 40 if I can help it."

"I like men who have had tough going—who perhaps have been beaten a bit by the world. They respond more eagerly to the opportunities that you can show them, and are more appreciative of the direction you can give them in becoming good salesmen."

"I don't want my men to have a car."

"Give a man a restricted territory to work, and above all provide him each day with specific leads on which to work. That's the manager's own job—to dig out those leads for his salesmen."

QUOTA FOR SALESMEN

"Establish a minimum quota for the salesman to meet—after he has had sufficient training, of course. But never keep deadwood around. Once it becomes obvious that the man isn't going to sell beverage coolers, advise him at once to get into something else."

"Train the man thoroughly both in the product story and in selling technique. Give the man all available printed information on the product, and don't let a day go by without 'skull practice' (sales meeting conducted by the manager) if you can help it."

"Don't allow the salesman to become 'stiff' or set in his sales approach. By example and stories teach him how to approach customers and to overcome objections. Teach him first how to gain a prospect's confidence."

Mr. Rozett doesn't pay his sales-

RENTAL SERVICE

DESSENT ENGINEERING COMPANY

CHICAGO, ILL.

(NAME)

(ADDRESS)
DESSENT ENGINEERING CO., Lessor, leases to you the undersigned named Lessee, and you hereby hire and rent from Lessor, DESSENT ENGINEERING CO., one (1)

electric refrigerator and equipment. Model, Serial No., for installation, ready for operation in Lessee's place of business at the above address; with not to exceed six (6) feet of electrical cord for electrical connection to Lessee's wall or floor outlet on the following terms and conditions:

The term of this lease shall be **thirty-four (34) months** from the date of installation. During the term of this lease, Lessor shall make all necessary adjustments or repairs required by the ordinary operation and use of the electric refrigerator and equipment, which shall at all times remain Lessor's sole property. Lessee shall pay to the Lessor, rent for said electric refrigerator and equipment at the rate of \$15.00 per month in advance, payable fifty (50¢) cents daily, including Sundays and holidays, said payments to be accumulated by Lessee by daily deposits in the coin meter attached to the said refrigerator for collection by Lessor's representative.

Lessor, its agents and representatives are hereby granted the right of free access at all times, to inspect, service and repair said electric refrigerator and equipment and to enter the premises where the said electric refrigerator and equipment may be kept, and may make collections at any time and as often as Lessor deems necessary, at the convenience of Lessor.

Upon the signing of this lease, Lessee will pay to Lessor \$....., and upon installation of said electric refrigerator and equipment, Lessee will deposit

in the coin meter cents per day for days, and cents per day thereafter.

This lease is subject to cancellation by Lessee at any time, upon one hundred twenty (120) days' notice in writing, served on Lessor prior to the date Lessee desires to exercise said privilege of termination, provided, however, if Lessee exercises such right of cancellation, Lessee shall be required to return and deliver the leased equipment, to Lessor, in good condition, and to pay the Lessor full rental accruing until the end of said one hundred twenty (120) day period, and thereafter, until the delivery of the leased equipment to Lessor or the acceptance thereof by Lessor. All advance rentals paid by Lessee shall be retained by Lessor for Lessor's liquidated damages.

This lease may not be assigned or transferred by Lessee, and the leased equipment may not be removed from the above address without consent in writing by Lessor. In the event of default in the rental payments, required hereunder, or if any writ or any distress warrant shall be levied on said electric refrigerator and equipment, or upon the filing of a proceeding in bankruptcy, receivership or insolvency by or against Lessee or said property, or if Lessor shall feel insecure or unsafe or shall fear diminution, removal or waste of said property, or in case Lessor deems the property in danger of misuse, confiscation, destruction, or on the termination or cancellation of this lease, then Lessor, without notice or demand and with or without force or process of law, may enter into any of the premises where the said electric refrigerator and equipment may be or be supposed to be, and search for the same, and if found take immediate possession of and remove said property without any liability on the part of Lessor; thereupon, all the rights and interest of Lessee in and to said property shall be terminated, as though this lease had been cancelled by Lessee. Lessee shall not cause or permit any waste, misuse or neglect of the property hereby leased, and agrees to keep same free of all taxes, and not to use or permit same to be used illegally or improperly.

Lessee agrees not to hold Lessor liable for any losses sustained due to refrigeration failure. Lessee agrees to keep said electric refrigerator and equipment in a clean, slightly, and sanitary condition.

If default be made in payment of the rent hereinabove reserved, Lessee does hereby irrevocably constitute any attorney of any court of record in this State, Attorney for him and in his name from time to time, to confess a judgment without process, in favor of Lessor, its successors and assigns, for the amount of rent which may be then due, together with costs and a reasonable sum for plaintiff's attorneys fees, and to waive and release all errors which may intervene in any such proceedings, and consent to immediate execution upon such judgment, and Lessee hereby ratifies and confirms all that said attorney may do by virtue hereof.

Should any clause, provision, paragraph, or portion of this lease be declared null and void, the remainder of this lease shall not be voided thereby, but shall remain in full force and effect.

Time is of the essence of this agreement. It is understood that there are no promises, verbal understandings or agreements of any kind other than as specified herein, and that in order for this contract to be valid, it must be signed by the Manager or Assistant Manager of the Dessent Engineering Co.

REMARKS

DESSENT ENGINEERING CO.

By.....

(LESSEE)

men fat commissions or "half the profits"—he says his sales expense probably doesn't run over 4%—but he gives his men a daily expense allowance, and he thinks that by providing salesmen with practically all of their leads he makes more money for them than if they made twice the commission they are getting, but had to dig up their own prospects.

"It enables the salesmen to concentrate on selling," he says.

Commissions are scaled on the basis of the value of the unit sold and the size of the down payment.

Mr. Rozett holds commissions in reserve for as long as 90 days in some instances, finding that this has a two-fold value.

(1) It helps the salesman's financial situation, and if he leaves to take another job, it comes in very handy, and creates a sort of tie that has brought many salesmen back into the fold after they once had left.

(2) If the user makes a complaint during the period in which the money is held in reserve, the salesman must straighten out the complaint. (Concluded on Page 7, Column 1)

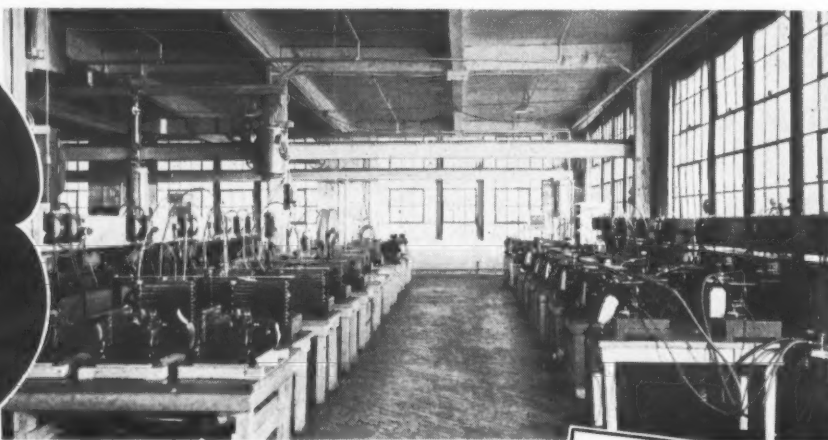
SOFTNESS

You get it in WOLVERINE TUBING

—Buy From Your Jobber—

WOLVERINE TUBE CO. DETROIT

Tests that
Assure You The
Dependable, Low
Cost Performance of
CURTIS
Condensing
Units



Running-In

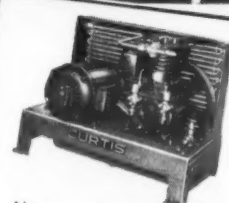
● In addition to a test for volumetric efficiency, every Curtis compressor is given an individual run-in test; first, operating as a compressor, and secondly as a condensing unit. Suction valves are tested by running the compressor against a maintained vacuum for a definite period of time.

The entire unit is checked for possible leaks in connections, for belt tension, for proper oil level. Discharge and suction valves are checked

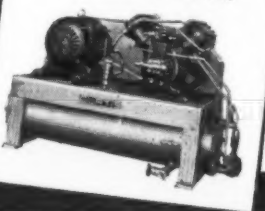
again, valves are closed and pressure controls set. The condenser is then charged with the proper refrigerant and run as a refrigerating unit.

Exact run-in tests are only one of many examples of the care and precision found in every step of Curtis manufacturing methods. The result is the long life, high efficiency and care-free performance of every Curtis Condensing Unit.

Write for full information.



Above—1½ h.p. Air-Cooled Condensing Unit
Below—1½ h.p. Cleanable Shell and Tube Condensing Unit



CURTIS
REFRIGERATION
AIR CONDITIONING
AND COMMERCIAL

CURTIS REFRIGERATING MACHINE COMPANY
1912 Kienlen Avenue Established 1854 St. Louis, Missouri

Division of Curtis Manufacturing Co.

EVERYTHING IN RUBBER FOR THE REFRIGERATOR

● Miller offers the service engineer an authentic line of replacement parts that duplicate the original point for point in both design and quality. Each item is an exact duplicate of that supplied the refrigerator manufacturer, made from the same dies, of the same age and grease-resisting rubber compounds.

And because Miller is the No. 1 supplier of rubber parts to the refrigeration industry, it can provide replacements that enable you to service 80% of all boxes in use today. All items are stocked for immediate delivery. For complete information, see your local Miller jobber or write—

MILLER RUBBER COMPANY, INC., AKRON, OHIO
"Engineers in Rubber"

- Door Gaskets
- Unit Mountings
- Sponge Rubber Insulation
- Shelf Hook Shields
- Breaker Collars
- Hard Rubber
- Rubber Covered Metal Parts
- Molded Parts

He Makes Beverage Cooler Sales Stick



I. R. Rozett (right) never is too busy to see either a salesman or a user—on either a business or personal problem. Sound, planned methods help his business, too.

Means of Providing Leads To Salesmen Of Bottle Coolers

(Concluded from Page 6, Column 5) plaint to the management's satisfaction before he gets his commission. Next phase of Mr. Rozett's business operations that bears close inspection is his method of getting "leads" for his salesmen.

Users figure prominently in this. Every so often the user receives a card or a letter that says "if you know of a friend who needs a cooler, give us his name, and it may mean a \$5 bill for you."

And if the prospect buys, says Mr. Rozett, always give the user a nice crisp \$5 bill, never credit his account for the \$5.

USE SOFT DRINK SALESMEN

Probably the biggest prospect-getter used is a tie-up which is made with salesmen for soft drink makers. These driver-salesmen, calling upon their customers, were instructed to take note of the beverage cooling equipment, and if it was inadequate, to call attention to it and say:

"Wouldn't you like to have one of our representatives come out and see you and tell you how you can get new equipment at low cost?"

Since the soft drink salesman is generally pretty well "in" with the customer this approach, in the vast majority of instances, leads to an invitation for a beverage cooler salesman to call.

The value to the soft drink companies comes from those places that don't have any kind of facilities for cooling or dispensing bottled beverages, and in which some sort of beverage cooler must be installed before soft drinks can be sold. Thus the soft drink driver-salesman becomes in effect a "cold canvasser" for the equipment dealer.

HOW TO ADVERTISE

A third method of getting names is through classified advertising. Use them when the interest in beverage coolers should be at its peak, says Mr. Rozett, and use classified advertisements in the "commercial" column. Typical copy for one of these advertisements is something like this:

"Why buy a refrigerator when you can rent one for 25 cents a day. Eventual ownership. Call today. (Phone number.)"

On the general administration of the business Mr. Rozett offers the following thoughts:

BUSINESS RULES

"Don't be too stingy on replacing unsatisfactory equipment. Build yourself a reputation for quick replacements, and you won't have any."

"Make the service guarantee for the length of the time-payment contract. If you don't do this, you're liable to destroy the whole setup."

"Never permit a salesman to be discourteous—or to become tough

with a customer. If someone has to get tough, let it be yourself.

"Don't ask for credit references, they don't mean anything. Make your own credit investigation, and if you think the account is shaky, make the first collection within two weeks after you've installed the box, and collect frequently thereafter until you're convinced that the user knows you mean business."

"Know your customers, and especially know your salesmen—take a personal interest in their domestic as well as their business problems, and you won't lack for loyal, efficient men who will follow directions."

Massachusetts Schools To Offer Courses

BOSTON—Several courses in air conditioning and refrigeration are being offered this fall by the extension division of the Massachusetts department of education.

Twenty-four lectures on household and commercial refrigeration will be given by Leo F. Carton, installation engineer for General Motors Sales Corp., beginning Nov. 1.

In the air conditioning field, C. P. Yaglou of the Harvard School of Public Health will offer 16 lectures on "Thermodynamics of Air Conditioning." This course is intended for consulting engineers and designers.

A course of eight lectures on "Automatic Controls For Heating, Cooling, and Air Conditioning" will be given by John H. Barrett of the Minneapolis-Honeywell Regulator Co.

"Practical Air Conditioning for Residences, Stores, and Offices" will be treated by P. A. L. Foulds, consulting engineer. This course is intended for salesmen, builders, and beginners generally.

A correspondence course in "Air Conditioning For Factories" will be given by C. Wesley Nelson, instructor in mechanical engineering at Wentworth Institute.

Two courses on "Instrument Craftsmanship" are to be given by Alfred Herschel, research engineer at the Foxboro Co., beginning Oct. 22.

Question of the Week

Answered By

F. O. JORDAN, Registered Consulting Engineer, State of Michigan

Calculations Useful In Building Flow Meter

Kellogg Div. of American Brake Shoe & Foundry Co. Rochester, N. Y.

Editor:

In reading through the Sept. 4 issue of AIR CONDITIONING & REFRIGERATION NEWS, I find the article on page 7 written by F. O. Jordan very interesting.

He states under the heading "Build a Flow Meter" that mathematical formulae are available for use in calculating orifice sizes and manometer heights. Can you please advise me where I may obtain such information so that we can make the required orifice in order to test the equipment we now have in mind.

B. W. MANTLE, Chief Engineer

Answer: In a recent article covering quick and easy methods of checking the capacity and efficiency of refrigerating compressors, it was suggested that the quantity of gas pumped by the compressor might be measured readily by the use of a homemade flow meter. Of course, your question refers to that article.

Formula for calculating orifice sizes and manometer heights may be found in any hydraulic or mechanical handbook. The formula is:

$$F = C \times \frac{3.1416 \times (D)^2}{4 \times \sqrt{1 - D/d}} \times \sqrt{2gh}$$

where F = Flow of gas in cubic feet per second.

C = Orifice coefficient.

D = Orifice diameter in feet.

d = Inside diameter of tubing in feet.

g = Gravity (32.2).

h = Differential between pressure at entering and leaving sides of orifice in feet head of water.

D/d generally is made about 0.8. In other words the diameter of the orifice is eight tenths of the inside diameter of the tubing.

The orifice coefficient (C) depends upon the orifice diameter as follows:

Orifice Diameter	Coefficient
1/2" to 1"	0.970
1" to 2"	0.980
2" to 6"	0.990
Above 6"	0.995

If this all looks a bit complicated or tedious for your purpose, remember it was stated in the article referred to above that the time-honored "cut-and-try" method is often used with good results. In any event, this information should give you a good start at cutting and trying.

Having decided upon your orifice and tubing diameters, the first thing I would suggest is to determine the approximate flow of gas you will have. This may be done if you know either the volumetric capacity of the compressor to be tested, or its refrigeration capacity.

The flow of gas in feet per second may be calculated from the following equation:

$$F = \frac{3.1416 \times (1/2 b) \times s \times nc \times cs}{1728}$$

where

F = Flow of gas in cubic feet per second.

b = Bore of cylinder in inches.

s = Length of stroke in inches.

nc = Number of cylinders.

cs = Compressor speed in revolutions per second.

If you do not have the dimensions of the compressor, but know the approximate tonnage, you may use the following equation:

$$F = \frac{3.3 \times T \times sv}{Hs - hl}$$

F = Flow of gas in cubic feet per second.

T = Ton of refrigerating effect of compressor.

sv = Specific volume of gas at suction pressure.

Hs = Total heat per pound of refrigerant at suction pressure.

hl = Heat of liquid refrigerant at liquid temperature.

The last three values may be read from any convenient refrigerant property table.

Now you have all the necessary values except "h," or the pressure differential between the entering and

leaving sides of the orifice. Therefore, you can substitute the values in the first equation and solve backward for "h," which of course will be the height of your manometer in feet if you use a water manometer or "U"-tube.

If you wish to use mercury in your manometer, you must multiply "h" by 0.88 to find the required height of your "U"-tube in inches. Of course, you should add a few inches to the height you arrive at, in order to avoid blowing some of your mercury, due to surges.

U.E.I. Moves Quarters, Enters New Fields

CHICAGO — To provide greater training facilities for its students, Utilities Engineering Institute is moving to larger quarters at Belden and Wayne Aves. here.

After 14 years devoted to training men for the refrigeration and air conditioning industries, the school now plans to extend its activities.

The new headquarters will accommodate general offices and shops for both Utilities Engineering Institute and Auto-crafts Training Co. Located in a school neighborhood, the new home of U.E.I. provides 24,000 sq. ft. of floor space.

REFRIGERATION WRENCHES



Light, strong, well-balanced alloy steel wrenches that simplify close-quarters work. Durable, chrome-plate finish. Write for literature. Sold singly and in sets by mill supply and refrigeration jobbers.

J. H. WILLIAMS & CO.
225 Lafayette St., New York, N. Y.



Investigate this Lower Priced Refrigeration Control

FRIGIDAIRE'S

Precision-Built

"YL" SWITCH

✓ One Model for All Common Refrigerants (Freon 12; SO₂; Methyl Chloride)

✓ Simpler, More Compact Design

✓ More Easily Adjusted—has visible scale for preliminary setting

✓ Furnished with Low Pressure or Thermostatic Control

✓ With or Without Motor Overload Protection

✓ High Pressure Cut-Out if Desired (comes in double unit case)

Available in various combinations of units to adapt it to every refrigeration need. Differential—Thermostatic type—minimum 3 to 4 degrees, maximum 10 degrees... Low Pressure type—minimum 5 lbs., maximum 55 lbs.

Write your Frigidaire Distributor today for new low prices. Ask for your copy of descriptive booklet with full details.



TO SATISFY YOUR EVERY REFRIGERATION SERVICE NEED



A Model for Every Commercial Refrigeration Need

MODEL TOO: (shown above) Thermostatic Control without High Pressure Cut-out. Cold Control standard (as illustrated).

MODEL TOH: Thermostatic Control. Includes High Pressure Cut-out. Double unit case. Cold Control standard.

MODEL LOO: Low Pressure Control without High Pressure Cut-out.

MODEL LOH: Low Pressure Control. Includes High Pressure Cut-out. Double unit case.

Overload protection is available in any model as desired.

CORNERS

25th Anniversary Year... 1915-1940



NO CUT

• The corner is cut out of this Ansul advertisement, but there are no corners cut in the production of Ansul refrigerants. Ansul tests and checks at every step right up to the loading platform. And every cylinder of Ansul gases carries its own individual analysis tag—written assurance it is Clean, Pure, Dry.

Agents for Kinetic's "Freon-12"

ANSUL CHEMICAL COMPANY

ANSUL

SULPHUR DIOXIDE

METHYL CHLORIDE

MARINETTE, WISCONSIN

AIR CONDITIONING & REFRIGERATION NEWS

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F. M. COCKRELL, Founder

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OCTOBER 2, 1940

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Bottled Gas Competition

RISE up from nowhere to gain respected recognition as a real competitor for the electrical appliance industry is the bottled gas business, and the appliances designed especially for the use of this new utility.

During the last four years this business has grown enormously, especially in such midwestern states as Michigan, Indiana, Ohio, Illinois, Wisconsin, and Iowa. And it is well worth a rather general survey at this time, as appliance dealers begin to study their market and plan their campaigns for 1941.

Bottled gas is no flash in the pan. It is an industry which is being guided by a national organization, the Liquefied Petroleum Gas Association; and supported by the technical and financial resources of some of the major oil and gasoline producers and the manufacturers of gas appliances.

By-Product Marketing Creates New Industry

The liquefied petroleum gas industry has grown from 20,000 customers in 1928 to more than 500,000 customers at the present time, according to sources close to the throne. This rapid development came not accidentally, but because one major industry visualized "additional profit" possibilities by marketing its by-product.

Also, manufacturers of gas appliances and equipment were quick to recognize a new potential market for their appliances of more than \$100,000,000, with possibly a 15 million dollar annual replacement market. To date, approximately 30 million dollars worth of ranges and 5 million dollars of water heaters and refrigerators have been sold to users of liquefied petroleum gas, according to information obtained by an electrical appliance manufacturer.

This "bottled gas" is a liquefied hydro-carbon gas which is obtained either as a by-product of the oil well, the natural gas well, or in the process of producing gasoline. Gases obtained from natural gas or oil field operation are methane,

ethane, propane, isobutane, butane, and pentane.

Because of their inherent qualities, mixtures of propane, isobutane, and butane are usually used for distribution to residential and commercial customers. Ethane and methane develop too much pressure to be safely used for such service, and pentane is used for blending with high-grade gasolines.

Normally the gas is odorless and colorless. It is important that a strong warning odor be added, otherwise a leak may not be detected until the oven of the stove, a room, or the house is filled with a highly explosive mixture of gas and air. The National Board of Fire Underwriters specifies that all gases be effectively odorized to indicate presence of gas down to concentrations of not over one fifth.

Adequate Service Depends On Many Variables

Electric service is always available at "the flick of a switch," but the adequacy of liquefied petroleum gas service depends upon many variable factors, such as the delivery service, the weather, the type of installation, the inspection service, the adjustment of regulators, valves and burners, and the facilities of the distributor who has the responsibility of maintaining an ample supply of gas at all times.

It is admitted that the modern liquefied petroleum gas range is a great improvement over the original unit, but despite these improvements, the electric range still offers definite advantages from the standpoint of cooking results, because of the problem of controlling the uniformity of the liquefied petroleum gas fuel.

Slight Changes or Defects Will Affect Results

Electric cooking and baking operations may be repeated again and again without guess work, but a change in temperature, the improper adjustment of the burners, or a stoppage of any of the port openings, will have a very direct effect on the liquefied petroleum gas results.

Another factor which has a direct influence on the convenience and the economy of this gas service is the method of distribution to the customer.

The gas is transmitted by pipe line from the gas field to concentrating plants, where it is converted to a liquid and then transported in tank cars to bulk distributing stations throughout the country.

How Bottled Gas Reaches Customers

Usually the distributor delivers the gas to customers in one of three ways: first, the two-cylinder portable system which usually consists of installing outdoors two 20-gallon portable steel tanks holding approximately 100 lbs. of propane, connected by means of copper tubing and regulating equipment to the appliances in the house; second, the permanent single-cylinder system of 150 lbs. capacity, also located outdoors, which is periodically supplied from a tank wagon; and, third, the underground tank varying in capacity from 100 to 300 gallons, located 25 to 50 feet from the premises.

It is evident that with the

They'll Do It Every Time . . . By Jimmy Hatlo



portable cylinder system the responsibility for continuity of service is held jointly by customer and the distributor; and with the permanent storage method, is entirely dependent on the distributor's routine and facilities.

Whole Flock of Gadgets Required For Operation

You may form your own conclusion regarding the simplicity and the reliability of equipment which depends for its operation on the following gadgets: regulator, low pressure relief valve, line control valve, high pressure safety relief valve, automatic filler valve, automatic vapor return valve, pressure gauge, fuel gauge, high pressure excess flow valve, gasifier and fuel agitator, and a re-gasifier. These are the appurtenances required to operate the underground tank system.

The installation charges vary throughout the country with the type of installation. During the last few years, the national association has recommended that these charges be uniformly set at \$9.75 for the systems which are installed with either one or two drums above the ground. Usually the distributor retains title to all supply equipment, such as tanks, regulators, and accessories. The customer merely pays for the initial installation of the equipment.

Underground systems which commonly use a 200-gallon tank cost approximately \$150, but the method of charging customers varies considerably, and in a number of instances the cost is included with the purchase of appliances and is spread over a period of years.

In the southwest, where winter heating requirements are modest, if liquefied petroleum gas is used for house-heating, its use for cooking, water heating, and refrigeration often follows.

Liquefied petroleum gas salesmen get a head start with intensive methods and sales points such as:

- Low installation cost
- Trade-in allowances for old equipment
- Trial installations
- Testimonials from satisfied users
- Thus the liquefied petroleum gas

industry, through cooperative effort and aggressive sales methods, has experienced a phenomenal growth during a relatively short period of time—and has become increasingly important as a competitor of electric service.

It performs a useful service and a valuable function, and so far has proved to be "clean" competition.

LETTERS

Responsibility For Product —Is It Ducked?

P. O. Box 1782
Baton Rouge, La.
Sept. 15, 1940

Editor:

In reading Mr. Hirschmann's letter in the current issue of the News, to use a slang expression, I believe he has something there.

Years ago the writer underwent the same hard and stony road with a placement division, but I was fortunate enough to be employed and tried to have them help me better myself but to no avail. That was the year the P.O. Department in Washington declared a surplus.

In the years that have gone by I have rather thoroughly gone into the subject and the one thing that stands out, to my way of thinking, is the very indifference as to what happens to the product once the dealer has made his purchase complete.

It seems that the manufacturer and also the distributor are only concerned with the ability of a dealer to pay for his purchases, or at least to convince them that he can. There is very seldom any inquiry as to the service set up. That, it seems, is the one place where, at least, some degree of attention should be paid, for after all the service department can make or ruin the dealer set up.

In our own trade territory it is common and well known information that one dealer uses his delivery boy to do his service and installation, another uses his two plumbers, and another uses his radio repairman, and we have plenty of good trained men who will eventually be called on to straighten out the various jobs as they have been called before. But the product has taken a beating not only in operation but also reputation has suffered.

So it seems to me that instead of trying to find new names for service men and jobbers something should be done to help the men who were willing to invest time and money in something they thought would be of help to them and the industry.

Maybe that point can be taken up at the next All-Industry Convention. I, for one, intend to be there and try. I am a member of the R.S.E.S.

If you do not think that this is too controversial would like to see it in print and get some of the trade response to same.

To my way of thinking either the manufacturers should work with the

recognized schools or else the schools should be made to back up their tall stories.

Thanking you for the interest your paper has shown to the industry as a whole in the past and hopes for a very prosperous future.

EDWARD A. SUMMER

Ahmed Fazelbhoj Writes a Tribute

21 Queen's Road
Bombay, 4, India
Aug. 21, 1940

My dear Mr. Taubeneck:

Three years ago, this time I believe, I was in Detroit, enjoying the hospitality of yourself and Mr. Cockrell. It was my first meeting with him, but immediately I formed the great respect and affection, from the very kindly way he would discuss my subjects and the considered advice that he would render to solve my difficulties, as you know I was an "infant" then in the refrigeration line and came to the States with a lot to learn.

During the past three years I had written to him often, always getting ready replies and in fact I was struck how far he would go out of his way to get information for me or recommend my firm to "proper channels" though my personal friendship with him was of short duration, which in the ordinary course anyone would treat as a casual acquaintance.

This spoke very highly for the sincerity of the man and that he should be so considerate and kind was the measure of his generous nature. He would render his best no matter what it cost him in effort to one and all who went for his experienced advice.

It is not often that one is fortunate to share the friendship of people who are so sincere in their reaction toward others. I felt very grateful to him for what he had done during the last three years for myself and my firm. It was naturally very sad news when I read about his death in your paper and I feel I have lost a good friend and a "guide."

I have been a subscriber of your paper for the last few years and I have the highest regard for it. This respect and admiration for your paper is shared by many other subscribers throughout the world. The popularity and success must be greatly due to F. M. Cockrell's sound policy and farsightedness.

I am confident the burden of responsibility that has come now on you will be borne with the same courage and energy and you will follow in the "footprints" of the sound tradition he has bequeathed your publishing house.

With my sincere wishes for your success.

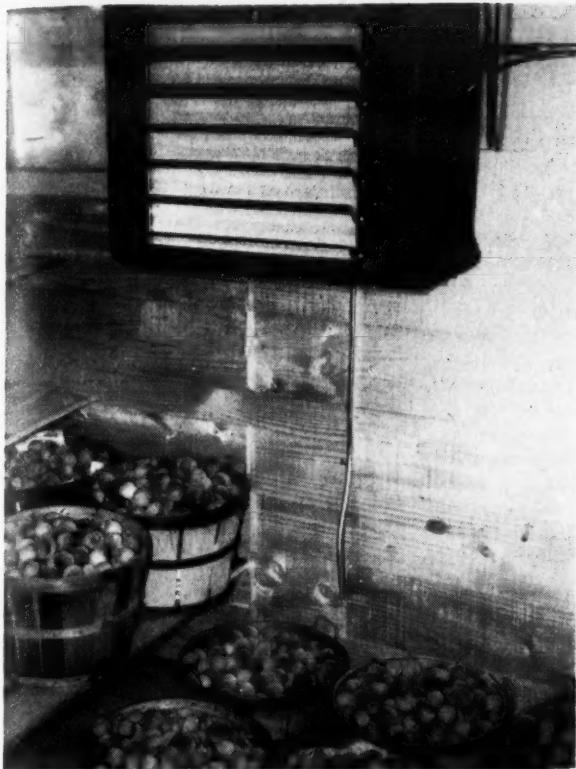
AHMED A. FAZELBHOJ

Omission

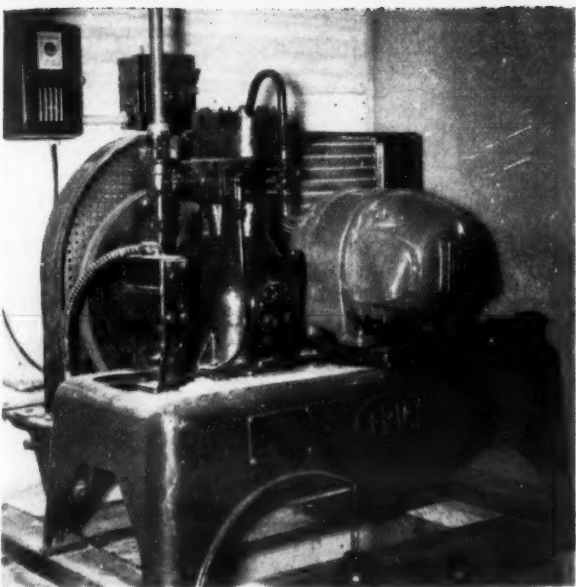
In the story headlined "Indoor Skating Rinks Now Constructed With Small Direct Expansion Systems" appearing on page 9 of the Sept. 11 issue of AIR CONDITIONING & REFRIGERATION NEWS, the article failed to identify R. J. Yocum and Miss Gladys Lamb, international ice skating stars who were in a photograph used to illustrate the story.

The News regrets this unintentional oversight.

Cooling For the Small Orchardist



Through this Rempe blower unit comes the air which keeps these peaches cooled to a temperature of about 36° F. The refrigerant lines in the upper right-hand corner run through one of the cold room walls to the compressor unit shown below. The installation was made for F. J. Stein of Clarkston, Mich. by Detroit Ice Machine Co., Frick distributor.



This 1 1/2-hp. Frick compressor is mounted outside the cold room in another portion of the basement. This unit, together with the blower shown above, comprises the mechanical equipment for this small-scale fruit storage installation.

Refrigeration Allows Correct Ripening

CLARKSTON, Mich.—Solution to one of the most vexing problems of the small-scale peach grower—that of properly preserving the crop from the time it is picked until the time it is marketed—has long been sought.

F. J. Stein, a General Motors experimental engineer who raises peaches on his farm near here both as a hobby and as a sideline business, thinks he has found the answer in the refrigerated fruit storage room which he has built into the basement of the new farm home which he is constructing.

Every fall, after he has harvested his peaches, Mr. Stein selects a few bushels for the use of his own family, then sells the rest.

To be at their best, peaches must be picked just as they ripen on the trees. But ripe peaches will not keep even the few days which usually elapse before they are sold. So common practice of the growers is to pick the fruit somewhat green, and then let it slowly ripen while awaiting sale. Peaches ripened in this way, however, lose much in flavor, texture, and juiciness.

Faced with this predicament, Mr. Stein finally decided that proper refrigerated storage facilities offered the only logical solution to the dilemma. So he contracted with Detroit Ice Machine Co., distributor of Frick equipment, to install adequate refrigerating equipment in the small cold room which he built in accordance with specifications prepared by the refrigeration firm.

The completed room measures 10

feet wide, 26 1/2 feet long, and 7 feet high, having a capacity of somewhat better than 1,800 cu. ft. Ceiling and sidewalls are insulated with 8 inches of granulated cork. Three inches of sheet cork was used in the floor.

One Model C 554 Rempe unit cooler mounted on the rear wall delivers all the necessary cold air into the room. Lines run from this unit through the partition separating the storage room from the other portion of the basement where the 1 1/2-hp. Model F 150FS Frick compressor is mounted.



Candy Display Case Cooled By Exposed Forced Air System

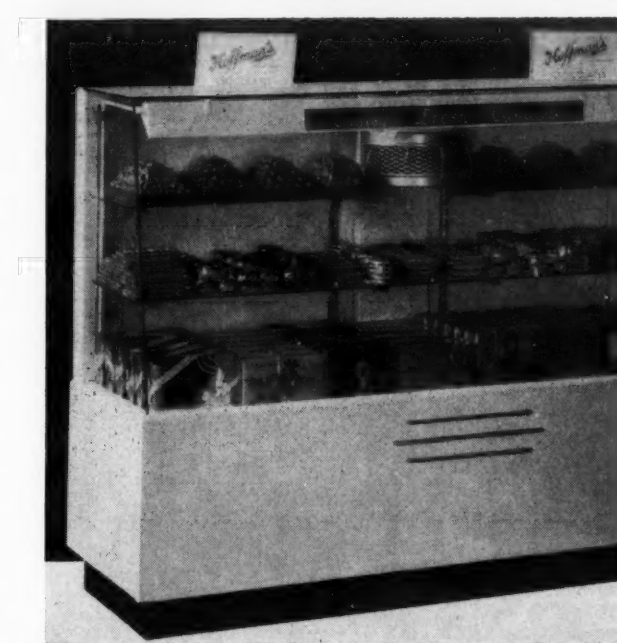
Circulator Blower Permits Compact Construction

LOS ANGELES—A special refrigerated display case for candies, designed to afford maximum display space and equipped with a self-contained forced air distribution system to keep candies at correct temperature, has been developed by Weber Showcase & Fixture Co.

In addition to providing increased effectiveness for the display of candies—bulk, bar, and box—the case has been designed with particular attention to eliminating losses due to excessive heat or moisture, which causes many candies to “sweat” and to discolor. Increased sales and profits have been reported in test installations using the equipment.

Lower front of the case's exterior is of sheet steel, finished in pastel blue high-bake luster Dulux, while the rest of the case is finished in white enamel. Interior illumination of the display case is by means of fluorescent lighting.

The case is 4 feet, 6 inches high, and 2 feet 1 inch wide, and is available in either 4 or 6-foot lengths. Smaller case is equipped with sliding doors in the upper section, with the lower compartment housing only the compressor. In the larger case, however, part of the lower section has a refrigerated storage compartment for additional stock. Shelves



New Weber specially designed candy case with mechanical cooling. Note blower unit on top shelf of case.

are of wire netting, to permit free circulation of air around the merchandise, and are adjustable.

Forced-air system used to cool the case was developed by Bedell Engineering Co., Los Angeles, under the supervision of M. P. Fugle, sales manager of that company. Circular and compact, this unit is mounted in the top of the case, drawing air up from the bottom and discharging it in a complete radius of 360°, so that the entire storage and display area is kept at a temperature of

from 60 to 64° F. All-copper Thermek coils are used in the cooling unit.

“Freon,” sulphur dioxide, or methyl chloride may be used as refrigerant with the Bedell cooling units. The units are made in 18 models, smallest having an 8-inch fan, a diameter of 12 inches and a height of 7 inches, and producing 175 c.f.m., and largest using a 16-inch fan, having a diameter of 27 inches and a height of 16 1/2 inches, and producing 1,000 c.f.m.

THIS IS THE COAT OF ARMS OF JOHN HANCOCK
His Life's Aim — A Declaration of Independence

THIS IS THE SYMBOL OF UNIVERSAL COOLER CORP.
Whose Business Aim Is Product Perfection

Perfection to us is not in doing miracles but simply in doing ordinary things extraordinarily well. As manufacturers of condensing units for the nation's foremost producers of refrigerating, air conditioning and liquid cooling equipment, ours is a product that well upholds brand prestige. Our research and technical staffs invite your problems. Write or phone for complete information.

UNIVERSAL COOLER CORP.
DETROIT, MICHIGAN
 In Canada: Universal Cooler Co. of Canada, Ltd., Brantford, Ontario

DUPONT
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You get the help of Du Pont Research and Technical Assistance with Preferred METHYL CHLORIDE plus Coast-to-Coast Prompt Distribution

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E. I. DU PONT DE NEMOURS & COMPANY (INC.)
 The R. & H. Chemicals Department
 Wilmington, Delaware

District Sales Offices: Baltimore, Boston, Charlotte, Chicago, Cleveland, Kansas City, Newark, New York, Philadelphia, Pittsburgh, San Francisco

California Locker Pioneer Opened Plant In 1922

TULARE, Calif.—To those who have been laboring under the impression that this refrigerated locker storage business is a development of the last two or three years, it may come as somewhat of a surprise to learn that this type of service was pioneered here in Tulare way back in 1922, when J. H. Frew built the Tulare Electric Hatchery and Cold Storage plant.

According to an "Among Our Citizens" article in a recent issue of the Tulare Daily Times, "Mr. Frew at that time (1922) installed 330 locked boxes where families could keep frozen meats in their individual compartments.

"A similar plant in Chico is said to have been the only other one of the kind in the United States when Mr. Frew opened his plant in Tulare."

Fair Game!

CHEYENNE, Wyo.—Bell Packing Co. reports that rental business in its new freezer locker service has been increased considerably since the big game season opened in Wyoming in September, by advertising that the freezer lockers are ideal for storage of wild game, and that the company maintains complete facilities for skinning, cutting, cleaning, wrapping, washing, and freezing.

The Heart of MUELLER PACKLESS VALVES



Is a Sylphon Bellows

Packless, leakless, service-free for life.

That is what Mueller Valves offer the user, thanks to Sylphon Bellows—the seamless, jointless, all-metal seal that has solved the problem of confining refrigerants, under various pressures, for so many manufacturers in the industry.

The Sylphon Metal Bellows, pioneered by Fulton Sylphon, has been the subject of continuous research and development for more than 35 years.

Consult with our engineers... let them tell you about the advantages and economies of the Sylphon Bellows. Ask for Bulletin TO-511.

THE FULTON SYLPHON CO.
KNOXVILLE, TENNESSEE

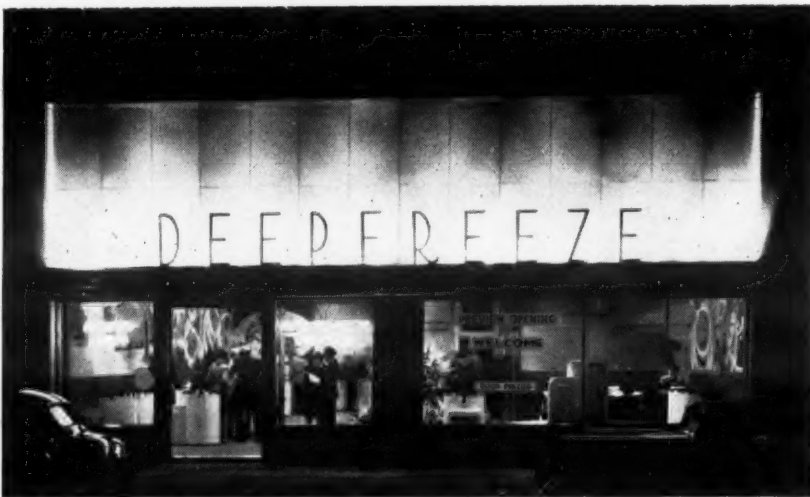
Representatives in All Principal Cities in U. S. A. and in Montreal, Canada and London, England

Deepfreeze Organization Opens Experimental Laboratory For Testing Merchandising Ideas

Inside & Out

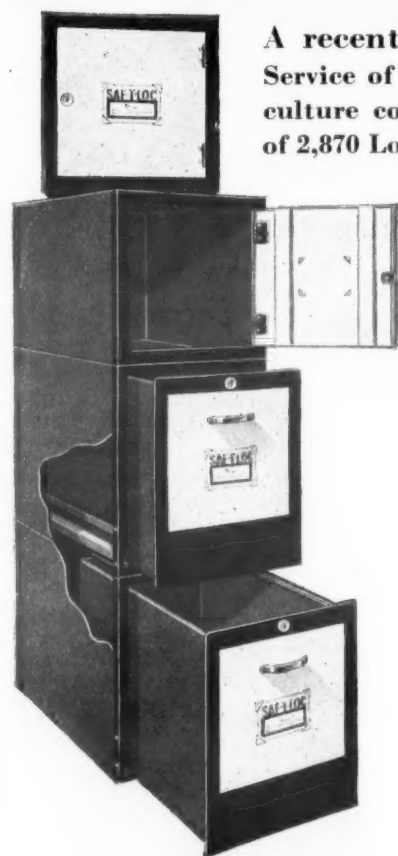


Here are some of the 45 Deepfreeze units which are in actual operation on the floor of the new sales promotion "laboratory."



Modern treatment and effective lighting combine to make the front of the Deepfreeze store serve as a magnet to attract passersby.

Over 31% of Locker Plants Reporting to U.S. Dept. Agric. ARE Masterbuilt Equipped



SAF-T-LOC
Food Storage Locker

MASTER REFRIGERATED LOCKER SYSTEMS, Inc.
121 Main St. Sioux City, Iowa

Nearly 200,000 Masterbuilt Lockers in Use

A recent report by the Extension Service of the U. S. Department of Agriculture covering 44 states shows a total of 2,870 Locker Plants.

Plants equipped with MASTERBUILT Food Storage Lockers account for over 31% (a total of 901 plants).

Master Dominance Substantiated

Here is positive proof of Master preference among owners and builders of Food Storage Locker Plants.

This overwhelming preference can only be attributed to Master's outstanding features and advantages.

Get the Facts

Send for complete details and find out for yourself why Masterbuilt Food Storage Lockers are preferred—why they save plant owners money. Ask particularly about our SAF-T-LOC Food Storage Locker (illustrated).

Endorsed and sold only through distributors of refrigeration and insulation.

DETROIT—To serve the three-fold purpose of wholesale-retail sales outlet for the Deepfreeze frozen food storage unit, retail frozen food merchandising operation, and testing laboratory for all Deepfreeze sales promotional ideas before they are released to the company's dealer organization, Deepfreeze division of Motor Products Corp. has opened a large and strikingly modern store at 846 W. McNichols Rd. here.

Heading up this new venture in the realm of field-tested sales promotional activity, by virtue of his position as merchandising manager of the Deepfreeze organization, is D. H. Glass, Jr. Until recently Mr. Glass was president and owner of D. H. Glass, Inc., a firm of sales promotional counselors which handled such major accounts as Norge, Westinghouse, and Chevrolet.

Forty-five Deep-Freeze units are on the sales floor of this store, all of them in actual operation and all of them used for the storage and dispensing of frozen foods as well as for product display.

The wholesale and retail Deepfreeze sales operations are maintained as separate departments, with James Stewart managing wholesale activities while Paul Ream handles the retail selling force.

At present the firm has two wholesale salesmen, but expects to add two more very shortly. These men will, for the time being at least, maintain headquarters in Detroit but will carry on their work in the outstate area.

The retail sales staff of seven men is soon to be augmented by four new members. These men spend part of their time in the store and part out, following a regular rotation of floor days.

The frozen foods merchandising angle ties in logically with both the laboratory testing of sales promotional schemes and the active sales of Deepfreeze units.

Main purpose of this activity is to enable the company to service with frozen foods the Deepfreeze storage units which it sells.

One of the outstanding Deepfreeze features is its extra-large capacity which permits large-scale (and therefore more economical) purchasing and storing of frozen foods, so the foods which the Deepfreeze store handles are packed, whenever the nature of the product makes this possible, in larger units than the meal-size packages to which the average retail frozen foods store must, of necessity, restrict itself.

Nearly 100 different items of frozen foods of several different brands are handled by the Deepfreeze store.

An invitational preview opening of the store was held Sept. 14, and the formal public opening Sept. 21. During the intervening week, the store operated on a limited scale.

Local newspaper advertising is being used to attract public attention to the new enterprise.

Plant Planned

WARREN, Minn.—The Warren Cooperative Creamery Association is planning construction of a cold storage locker plant here.

NEW PLANTS

In Operation

GIBBON, NEB.

GIBBON, Neb.—Nebraska's one hundred and seventieth cold storage locker plant was opened here recently by R. R. Farquhar, representative of the Omaha Cold Storage Co. The new plant has 100 lockers, and uses Baker equipment.

Approximately 75% of 170 locker plants in Nebraska are in the eastern section of the state, Mr. Farquhar said. Fremont, 50 miles west of Omaha and the same distance north of Lincoln, has the largest plant in the state, with 800 lockers available.

MERRILL, WIS.

MERRILL, Wis.—Elroy and Roger Schumacher have opened a new frozen food locker plant at 702 Center Ave. Housed in a two-story concrete block building, 60 by 28 feet, the plant has 330 lockers. In connection with its formal opening Aug. 16 and 17, visitors were eligible for attendance prizes in the form of free locker rentals. Beecher-Cumming, Inc., Minneapolis, made the installation.

JEFFERSON CITY, MO.

JEFFERSON CITY, Mo.—The S. & S. Cold Storage Locker Plant, operated by Larry Sullivan, has been reopened here after a \$13,000 remodeling program. Five rooms are operated—pre-chill, chill room, quick-freezing room, locker room, and cutting and wrapping room.

Under Way

KENNETT, MO.

KENNETT, Mo.—A. Riggs & Sons is installing a quick-freeze locker plant here which will have a capacity of about 300 individual lockers. The plant, to be known as "Kennett Frozen Food Bank," is the first quick-freeze plant to be located in southeast Missouri.

FORT WORTH, TEX.

FORT WORTH, Tex.—Three 300-locker refrigerated storage plants are currently being installed in Texas communities by Baker Ice Machine Co.'s branch here.

Owners and locations of these plants follow: Pollerts Grocery & Market Co., Denison; Dick Kiker, Spearman; Consumer's Fuel Association, Dalhart.

PORT ARTHUR, TEX.

PORT ARTHUR, Tex.—A 1,000-locker quick-freeze and cold storage plant costing \$35,000 is nearing completion at 1223 Sixteenth St., and is expected to be placed in operation in time to receive this year's perishable crops.

The locker plant is located in the Champagne building and installation of the equipment was made by Way Engineering Co., Houston. The plant is owned by a group headed by Fred Noel, local manager of Pittsburgh Water Heater Sales Co., and half owner of a similar plant at Nacogdoches.

Fifty-seven plants are now in operation in Texas, Mr. Noel said.

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ZERO PADS

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NEW TUBELESS COLD PLATES!

Write for full details today

Peerless OF AMERICA INC.

Midwest Factory General Offices—515 West 35th Street, Chicago
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SERVEL

COMMERCIAL REFRIGERATING MACHINES

Whether your requirements are large or small, standard or special, Servel engineers can help you solve your most vexing problems of commercial refrigeration or air conditioning. Write today to Servel, Inc., Electric Refrigeration and Air Conditioning Division, Evansville, Ind.

Advantages of Unit Conditioners Shown In Department Store Installation

PROVIDENCE, R. I.—Use of self-contained store cooling units in a large women's ready-to-wear store is demonstrated by the addition of several new conditioners in the Cherry & Webb Co. here. Beginning in June, 1939, the company has purchased a total of seven 10-hp. units and three 7½-hp. conditioners.

In analyzing the different types of air conditioning available to them last year, executives of the store decided upon a trial installation of units because of certain advantages which seemed to be inherent in their design. For one thing, they reasoned that it would be practical to buy their air conditioning equipment piece-meal, if they elected units, because additions to the system could easily be made any time without disrupting normal business operations, and without extensive re-decorations. Likewise, units could be moved easily whenever a rearrangement of sales departments became necessary.

MINIMUM SPACE REQUIRED

Unit air conditioners require but little selling space, which was already at a premium because of the growing nature of Cherry & Webb's business.

The use of several units, with several points of individual control scattered throughout the store, promised flexibility and economy of operation because certain areas could be cooled independently of the rest of the store.

Because of these considerations, Cherry & Webb bought two General Electric 10-hp. units in June, 1939, from E. Pulver Cook, G-E distributor in Providence. They were installed and operating within 14 days after the order was placed, without interfering with business, for much of the work was done after store hours. Experience with this equipment led to the purchase of two more 10-hp. units the following month. These were installed and operating within 10 days after the order had been received.

CONCEALED UNIT

Two of the units are located on the second floor, serving the millinery and sports wear departments. One unit stands behind display racks, the air being distributed direct from the unit. The other is tucked away behind dressing rooms against the wall, with the air distributed through ducts running the length of the floor against the wall.

The other two units were installed on the fifth floor, for the children's and young misses department. Here

both conditioners are located at the end of the floor behind display cases, with ceiling ducts running the length of the floor along column lines. This spring the decision was made to complete the conditioning job.

Three more 10-hp. units and three 7½-hp. units were required. Three of the units were used on the street floor. Only the air conditioning sections of these units, each located on a stand over the display racks, are located in this area. The condensing unit sections were installed in locker and storage spaces down in the basement. A 10-hp. unit and a 7½-hp. unit, each with ductwork running along the wall, are located on one side of the room.

BASEMENT COOLED

A single 10-hp. unit, also with ductwork, serves the other side of the floor. Conditioning sections are mounted on pipe stands so they can be moved if the department is rearranged.

The basement sales area is served by two 7½-hp. units. Both of these are hidden in storage space behind the display racks and the air is distributed through ducts. The fourth floor (alteration department, business office, and credit department) is served by a single 10-hp. unit.

Famous Roadhouse Installs Cooling

CAMBRIDGE, Mass.—Air conditioning and refrigeration are important to the operation of Smith House, a \$100,000 roadside restaurant operated by William E. Smith here. Mr. Smith, now 82 years old, has operated restaurants for more than 65 years, and his new establishment incorporates ideas gathered during years of travel in the United States and foreign countries.

The main dining room, seating 350 persons, is completely air conditioned for summer comfort by a system using a York "W" type compressor having a capacity of 30 tons. Temperature control is of the compensating type, and relative humidity is held at 50%.

Refrigeration for the kitchen is supplied by York 1½ hp. and 2-hp compressors, operating walk-in and reach-in refrigerators. All reach-in boxes are built of stainless steel, and are kept at 38° F.

Drinking water is cooled by another York 1-hp. compressor, and the soda fountain also has its own small refrigerating machine.

Store Cooling Units With Ductwork



Unit conditioners installed with ductwork were used to cool several floors of the Cherry & Webb department store at Providence, R. I. On the first floor the two units shown here are connected to ductwork running along one wall. The system was placed in service with no interruption of the store's business.

Passengers & Cargo Cooled on Liner

NEW ORLEANS—Crossing the equator on the voyage to Rio de Janeiro and Buenos Aires is no longer an ordeal for passengers on the new air conditioned liner S.S. Delbrazil. Equipped with marine refrigeration and air conditioning, the vessel carries both freight and passengers.

Temperature and humidity are controlled in the dining salon, which accommodates 70 passengers, by means of a 25-ton Carrier marine type air cooling system, using reciprocating compressors.

Refrigerated boxes, having a capacity of 2,900 cu. ft., take care of meat, vegetables, fish, and other food storage problems on the Delbrazil.

The vessel is also equipped with two refrigerated cargo spaces, each of approximately 5,000-cu. ft. capacity. Temperatures can be maintained from 10° to 50° F., permitting the handling of frozen beef, fish, and poultry, as well as fruits and vegetables.

Western Company Takes Department Store Job

LOS ANGELES—The Western Air Conditioning Co. of Los Angeles has been awarded the air conditioning contract on the new Broadway Department Store, under construction in Pasadena at Colorado St. and Los Robles Ave.

'Package' Units Top N. Y. C. Sales

NEW YORK CITY—Contracts for 948 air conditioning installations were secured by dealers in the metropolitan area during the first eight months of the year, according to statistics compiled by Consolidated Edison Co.

Included in the installations were 1,004 self-contained units, of which 717 were of 1½ hp. or less and 287 of 2 hp. capacity or larger.

Following is a classified list of installations for the 8 month's period:

Residential	151
Airport	1
Banks	6
Barber-Beauty Shops	13
Clubs	4
Funeral Parlors	5
Hospital Room	1
Hospital Laboratories	2
Hotel Guest Rooms	10
Hotel Public Rooms	6
Office Buildings	5
Private Offices	242
Public Building	1
Restaurants	146
Showrooms	41
Department Stores	12
Retail Stores	108
Theaters	20
Miscellaneous Commercial	12
Miscellaneous	61
World's Fair	12
Bakery	1
Candy Manufacturing	12
Food Storage	3
Fur Storage	10
Laboratories	2
Meat Packers	2
Photo Processing	1
Warehouses	4
Brewery	1
Instrument Manufacturing	1
Miscellaneous Industrial	10

Light Fixture Causes Air Moving Problem

MILWAUKEE—A large crystal chandelier, which would go off in a recital of dangerous and annoying clinking when an air stream hit it, presented a particularly knotty problem in air conditioning a Milwaukee hotel.

Licking the problem with a special installation saved wear and tear on the costly chandelier, solved the hotel's cooling problems, and became a valuable "user advertisement" for Everett Smith Automatic Temperatures, Inc., Kelvinator dealer here.

The big job, according to Frank Hickcox of the installing company, was to get the air outlets low enough to pass under the sensitive chandelier, yet placed so the room would be properly cooled. The room, a ballroom, was on a lower level than the lobby floor and was reached by steps from the lobby.

A system of wall or ceiling outlets was ruled out. The desired cooling was obtained with an installation that was as simple as it was effective. Nine floor-type cooling units were spotted around the room, making the air stream low enough to miss the chandelier, and minimizing the effect of the open doorway.

Anaconda Copper Refrigeration Tubes

"Assembling instructions"—details page 11 of new book

THE AMERICAN BRASS CO.
FRENCH SMALL TUBE BRANCH
General Offices: Waterbury, Conn.

SERVICE CALLS HAVE
SURE BEEN CUT DOWN
ON OUR NEW EQUIPMENT

THOSE WAGNER
MOTORS
DID THE TRICK!

WAGNER MOTORS

BUILD CUSTOMER ACCEPTANCE FOR YOUR EQUIPMENT

The dependable performance of Wagner motors on stokers, refrigerators and air-conditioning equipment minimizes service calls, enabling the dealer to keep his profit on the sale.

This record of performance of Wagner motors increases the sales possibilities of Wagner-motored equipment and appliances through increased confidence of users and dealers.

Realizing the value of this established user acceptance, alert dealers are quick to tell their prospective customers that the appliances they sell are equipped with Wagner motors.

Bulletins MU-177 and MU-182 give you complete information on Wagner motors. The coupon below will bring your FREE copies.

MAIL COUPON TODAY

WAGNER ELECTRIC CORPORATION M 40-13
6400 Plymouth Avenue AC&RN
St. Louis, Missouri

Gentlemen:
Please send me FREE bulletins MU177 and MU182.

Name _____
Firm _____
Address _____
City _____ State _____

Wagner Electric Corporation

6400 Plymouth Avenue, Saint Louis, Mo., U.S.A.

MOTORS • TRANSFORMERS • FANS • BRAKES

The DEPENDABLE Complete ASSEMBLY

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Air Conditioning
Jobs

You Assure Customer Satisfaction
with LAU Equipment

Lau Blower Assemblies included in your air conditioning units can be depended on to assure no kick-backs and practically no service calls as far as the blower is concerned. Greater customer satisfaction naturally follows.

Every year we ship to builders of air conditioning units thousands of Lau wheels and assemblies.

This smaller equipment is designed with the same skill characteristic of the larger Lau Blowers . . . and just as carefully fabricated and tested.

There are sizes of Lau Blower Assemblies to meet every requirement. The next time you specify, join the swing to Lau. You can depend on Lau to meet your every specification.

Write or wire for our catalog and complete details today.

LAU
BLOWERS • FANS • WHEELS • PILLOW BLOCKS
THERE'S A SALES ENGINEER NEAR YOU

Lau Blower Co., 2016 Home Ave., Dayton, Ohio

TRIPLE TROUGH COOLERS
(Coil Plus Baffle)
DRIFF-PROOF—EFFICIENT
KRAMER-TRENTON CO.
TRENTON, N. J.

DISPLAY CASES
Write for details of this sensational new 100% PORCELAIN Display Case line.
MIDWEST MFG. COMPANY
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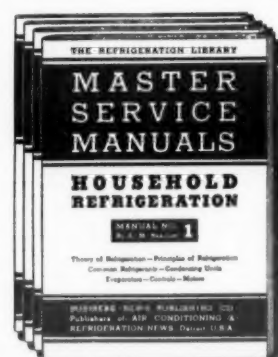
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A complete line in all sizes
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Frozen Food Lockers
Provide Extra Profits
Sure Repeat Orders
Sold Only
Through Dealers
ALL-STEEL-EQUIP COMPANY, INC.
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Sells Faster Because It Cools Faster!
IDEAL SPEED COOLER
Ideal Beer Cooler Co.
2953 Easton Ave., St. Louis, Mo.

VOT WITH MY FINGER TIPS?
YES SIR FINGER TIP OPERATION
By Their Yellow Tag Shall Ye Know Them!
SUPERIOR "Soft Seat" DIAPHRAGM PACKLESS VALVES
Yep! They really have soft seats—no kiddin'! So easy are they to close that a child could do the job; yet the seats are tough and long-lasting.
Ask your jobber—or write for Catalog
SUPERIOR VALVE & FITTINGS COMPANY
1509 WEST LIBERTY AVENUE • PITTSBURGH, PENNA.
EXPORT: 100 VARICK STREET • NEW YORK, N. Y.

Servicemen everywhere use these manuals—



With a world of background of practical experience, and as an instructor in schools in the refrigeration industry, K. M. Newcum has here produced a series of four manuals that are being used daily by service men everywhere.

This series consists of four manuals. Price \$1.00 per copy. They may be bought singly or as a series, from your jobber—or order direct (see coupon below).

A brief outline of the series follows:

MANUAL NO. 1—The theory and principles of refrigeration explained in simple terms. Characteristics of common refrigerants. Construction and operation of the major parts of a household refrigerator. 144 pages. Price \$1.00.

MANUAL NO. 2—Diagrams show how to distinguish the difference between the fundamental types of systems. Detailed instructions regarding the proper methods of installing and servicing each type. A comprehensive guide for all the popular makes. 128 pages. Price \$1.00.

MANUAL NO. 3—Detailed data on methods of servicing several special refrigerators including Allison, ElectriCE, Holmes, U. S. Hermetic, Majestic Conventional, Majestic Hermetic, Socold, Iroquois, and Welsbach. 144 pages. Price \$1.00.

MANUAL NO. 4—Service information on 12 makes of household electric refrigerators including Absopure, Apex, Atwater Kent, Coldspot (Sunbeam and Sears), Copeland, Dayton (Niagara), Fairbanks-Morse, Graybar Iig-Kold, Iceberg, Liberty, Rice, Servel. 128 pages. Price \$1.00.

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☐ Enclosed find check. ☐ Ship C.O.D. and I will pay the postman.

Name.....

Company.....

Address.....

10-2-40

Parts Are Only a Part of the Business



Jack Cowan of Automatic Products Co., E. M. Gresham of Heat & Power Engineering Co., and H. C. Bennington in the display room of the Toledo jobber's headquarters. Below: Miss "Tottie" Sherman.



Toledo Jobber 'Doubles In Heating' To Get More Business

TOLEDO—Sale of new refrigeration equipment for original installations has been responsible for a substantial gain in the business of Heat & Power Engineering Co. here this year. E. M. Gresham, owner of the refrigeration supply jobbing firm, reports that "75% of the gain" has been picked up in the territory outside of Toledo.

The firm handles oil burners and heating equipment at retail and a full line of refrigeration supplies and accessories at wholesale. Territory covered includes northwestern Ohio and the southeast corner of Michigan.

Mr. Gresham feels that a refrigeration supply jobber should develop his business along the line of original equipment and not depend on replacement work for a volume of business. This means contacting many refrigeration dealers and distributors in the territory served, as well as service engineers.

The firm has approximately 450 active accounts at the present time, and more are being added as the outlying territory is covered. Mr. Gresham follows a policy of personal solicitation in developing accounts.

While Mr. Gresham is away, the business is managed by Miss Alta (Tottie) Sherman, who is thoroughly acquainted with the stock of refrigeration parts and supplies on hand. Her contagious smile and gracious manner proves a valuable asset to the business. Miss Sherman knows what to tell the customer—and, in a way that keeps him coming back to buy.

Plastic Shower Head Wins Award For Mueller Brass

NEW YORK CITY—A streamlined molded plastic shower head won top prize for Mueller Brass Co. in the household group of the Fifth Annual Modern Plastics Competition sponsored by Modern Plastics magazine.

Available in 18 colors to match bathroom fixtures, the shower head was designed by R. L. Comb of Mueller Brass Co., and H. A. Husted of Standard Products, Thermo-Plastics division.

All-Appliance Belt Data Given In Goodrich Book

AKRON, Ohio—Alphabetical listings of belt requirements for electric refrigerators, washers, water pumps, stokers, beer pumps, oil burners, and other types of belt-driven equipment are contained in a 170-page "V-Belt Data Book" just published by B. F. Goodrich Co.

Listings give the manufacturer's part number, the Goodrich belt number, and its size in each case. Twenty-four pages of the booklet are devoted to numerical group listings of belt sizes, eight pages to a numerical list of belt dimensions both for V and flat belts, and 13 pages to conversion listings.

Represents Deepfreeze

HOUSTON, Tex.—Air Conditioning Co. here has been appointed distributor for Deepfreeze frosted food storage units.

Kingerley Will Assist Colyer in Wolverine Jobber Sales Work

DETROIT—A. S. Kingerley has been promoted by Wolverine Tube Co. to the post of assistant to J. D. Colyer, vice president in charge of sales, in all jobber sales activity of the company. The appointment is effective Oct. 1.

Mr. Kingerley has served Wolverine Tube in various sales capacities for 14 years. For the past three years he has been engaged in general tubing sales in the Detroit area, in which work he will be succeeded by H. L. Millett of the company's sales department.

Atlantic Jobbers Plan Winter Meeting At All-Industry Show

HARRISBURG, Pa.—Members of the Middle Atlantic Refrigeration Supply Jobbers Association will hold their winter meeting in Chicago on Jan. 13, during the All-Industry Exhibition, it was decided at the fall session of the organization here Sept. 23.

George J. Roche, president of the organization, was in charge of the meeting, at which three new companies were admitted to membership in the group.

These firms were: Joseph Woodwell Co., Pittsburgh, represented by P. T. McCormack; A. R. Tiller, Inc., Richmond, Va., represented by L. F. Herold; and Electric Warehouse, Philadelphia, represented by W. G. Zuschlag.

R. D. Jones, Harrisburg jobber, was host to the meeting, and Fred B. Hovey, executive secretary of National Refrigeration Supply Jobbers Association, spoke to members on "The Value of Trade Associations."

Short talks also were given by A. H. Holcombe, Jr., T. W. Binder, and H. V. Dick. Harry H. Jaeger is secretary-treasurer of the regional group.

New Bush Agent



CECIL A. BOLING

Boling To Represent Bush In East

(Concluded from Page 1, Column 2) equipment. With the M-A-D organization, Mr. Boling served successively as engineer in the Boston office, manager of the Baltimore branch, southern district manager, sales manager, and vice president and director. Since 1937, he was in charge of the domestic distributing organization of the company.

Associated with Mr. Boling in the new agency will be J. G. Beierlein, J. K. Campbell, R. C. Reese, H. M. Sweeney, L. G. Underhill, and R. K. Long. All of these men have had wide experience in the refrigeration field, and will offer a complete engineering service.

Territory to be served covers the east coast states from Maine to Virginia, including the eastern part of Pennsylvania and the District of Columbia.

Present plans call for offices in Boston, New York City, Philadelphia, and Baltimore.

GALE COMPRESSORS
Single and twin cylinder units. Engineered and manufactured to highest standards. Write **GALE PRODUCTS**
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CAMPBELL REFRIGERATOR CO.
Milwaukee, Wis.
Dealers Wanted for Midwestern and Southern States

SaniLok FOOD LOCKERS
Sold ONLY by refrigeration supply dealers. Write today.
McGREGG MACHINE CO.
Lincoln, Nebraska

PENN AUTOMATIC CONTROLS AND SWITCHES
Protect the reputation of your product. Write for Catalog
PENN ELECTRIC SWITCH CO.
GOSHEN, INDIANA

Mueller Brass Co. LITTLE GIANT Cuts Power Costs
Watch for our Announcement

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with the "FRICTION-GRIP" HIGH CONDUCTIVITY BOND
BETWEEN FIN AND TUBE
McQuay-NEE
MINNEAPOLIS, MINN.

Hardy-MAYFLOWER commercial compressors
are Efficient, Sturdy and Reliable
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KALAMAZOO, MICHIGAN
Sales Offices in All Principal Cities

From 1/4 to 25 TONS of refrigeration
Brunner Refrigerating and Air Conditioning equipment comprises air and water cooled condensing units for practically all types of commercial applications up to and including 25 tons of refrigeration... Catalog promptly on request.
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BRUNNER
FOR YEARS THE SYMBOL OF QUALITY

Some Defects In a System That Wrongly Indicate a Faulty Expansion Valve (Cont.)

Leaky Compressor Valves, Improper Location Of Drier, Refrigerant Shortage Are Some Causes

By Arch Black and Dean C. Seitz

Editor's Note: This week's installment in the series of articles on installing and servicing counter freezers and other kinds of low temperature equipment, continues the discussion of the major factors which may fool a service engineer into thinking an expansion valve is defective when it isn't.

4. LEAKY INTAKE OR EXHAUST VALVE ON CONDENSING UNIT

It appears to require quite a stretch of the imagination to suggest that a leaky condensing unit valve would cause an expansion valve to appear defective. However, this may be the case.

If dirt is located under the valves of the condensing unit, holding them open, the condensing unit is losing a great amount of its efficiency. In fact the loss of efficiency may be as much as 50%.

If, at the time of the initial installation, the expansion valves are properly set to hold the frost line when the condensing unit is operating 100% efficiently, then it would be necessary to readjust the expansion valve if the condensing unit lost 50% of its efficiency. In other words, the setting of the expansion valve is somewhat dependent upon the capacity of the condensing unit to which it is connected.

On the assumption that a system contained a broken exhaust valve, which might occasionally wiggle itself into position, then for short periods of time the condensing unit would operate perfectly satisfactorily and at its maximum efficiency. At other times the exhaust valve would wiggle itself out of position so that compression is obtained only on one cylinder.

When the condensing unit was operating perfectly, that is, when the exhaust valve was in its proper position, the frost line on the low side would be at its normal location. The instant the exhaust valve became jiggled out of position, the frost line would back into the cabinet, for in reality we have only a half-size compressor on the job for those moments.

The wide variation in the position of the frost line under these conditions would undoubtedly be blamed on the expansion valve by the service engineer. However, from the description above, it is apparent that the trouble was not caused by the expansion valve, but rather by the fact that the condensing unit was only obtaining compression on two cylinders most of the time. The remainder of the time, only one cylinder was in operation due to the broken exhaust valve.

Although this is a rather rare circumstance it is merely pointed out to show that there are many factors which may make it appear that the expansion valve is defective when this is not the case.

5. IMPROPER LOCATION OF REFRIGERANT DRIER

Again it would appear that the location of the drier on a refrigerating system would have nothing to do with whether or not an expansion valve appeared to operate satisfactorily. Yet, location of the drier might not only cause a service engineer to feel that the expansion valve is not operating, but at the same time he might gain the impression that the entire system was short of gas.

This is particularly true of self-contained ice cream freezers. On some self-contained freezers, an Activated Alumina refrigerant drier was installed as standard equipment at the factory. It was possible under certain conditions for the temperature of the refrigerant drier to become so warm from motor heat that the drier itself was actually at a higher temperature than the receiver of the condensing unit.

Each time the condensing unit stopped, the obvious result occurred. Since the drier was warmer than the receiver when the condensing

unit stopped, momentarily a slightly higher pressure existed in the drier than existed in the receiver. The liquid would, therefore, flow backwards from the drier into the receiver to equalize these pressures.

Under these conditions, the drier filled up with high pressure gas and as quickly as the condensing unit again started the automatic expansion valve had to pass this high pressure gas instead of liquid refrigerant. When it did pass this gas, the gas went through the valve so rapidly that it squirted ahead of it the liquid refrigerant that was standing in the evaporator. This liquid refrigerant came out on the suction line and made it appear that the frost line was coming all the way out to the crankcase.

As quickly as all of the high pressure gas had been passed through the expansion valve, then liquid refrigerant would again fill the drier and pass through the valve in the normal manner. With liquid passing through the expansion valve the frost line would again back up to its proper location.

These symptoms led service engineers to believe that the expansion valve was defective. The real trouble was not with the expansion valve but with the fact that the drier had been mounted in such a location that it was possible for it to become warmer than the receiver itself.

Some electric motors have air cooling ports extending through the motor. The purpose of this porting is to assist in rapid cooling of the motor. Never under any circumstances mount a refrigerant drier directly in front of these ports. The air discharge through the motor will be warm, in fact much warmer than the air passing over the condenser.

As a result, the temperature of the drier when located in front of such a motor will always be higher than the temperature of the receiver. Under these conditions the above difficulty may be encountered.

The obvious remedy is to remove the drier from its location in front of the motor to some other point where the temperature will be approximately the same as that of the receiver.

Above it was stated that these symptoms might also lead a service engineer to believe that the system was short of refrigerant. When a drier is installed in front of an air cooled motor, permitting it to become warmer than the receiver, liquid refrigerant will flow backwards from the drier into the receiver as quickly as the condensing unit stops. This backward flow of refrigerant is due to the slight difference in pressure between the receiver and the warmer drier.

If a combination drier and liquid sight glass had been installed on this installation and the service engineer happened to see the installation at the time the refrigerant was flowing backwards, he would have assumed that it was short of gas due to the fact that the sight glass in the refrigerant drier was "flashing."

Obviously, adding gas would in no way correct the trouble. As stated previously, the only correction is to remove the drier from a warm location and mount it remotely where it will not be at a higher temperature than the receiver itself.

6. SHORTAGE OF REFRIGERANT

A system which is short of refrigerant will give symptoms of a leaky expansion valve. The reason for this is that the expansion valve is not passing only liquid refrigerant, but also is passing a mixture of liquid refrigerant and gas. The gas which passes through the valve, in reality squirts and pushes the liquid refrigerant standing in the evaporator ahead of it. This forces the frost line to move out rather far on the drier coil.

Adjusting the expansion valve does not appreciably help the situation, for the frost line continues to stay outside the cabinet.

Where an installation is extremely

A Reader Takes Issue With the Authors on Where To Look For Expansion Valve Troubles

Bradenton, Fla.
Sept. 23, 1940

Gentlemen:

Your article on expansion valves in the last issue of AIR CONDITIONING & REFRIGERATION NEWS interested me strangely. Possibly I differ from most service men, but the first place I check or look for trouble, in an expansion valve, is the strainer or screen, and during the years I have been at this game I have found considerable expansion valve trouble. Strangely, the article did not men-

tion the troubles I have found. The principal one of which is moisture in the power element compartment. And testing will not find it. The second trouble is ruptured body bellows, another defect difficult to test for. And I have found discharged power elements without cracked or broken thermal tubes. Corrosion can eat the solder out of the joints or the bellows can rupture. Anyhow, I have found them discharged. The manufacturers to the contrary notwithstanding.

A. R. POOL

short of gas, the opposite conditions will occur. Namely, the frost line cannot be brought outside the cabinet, no matter how the valve is adjusted. Both of these conditions would indicate a defective expansion valve to some service engineers. This is obviously not the case, the system being merely short of gas.

Easiest method of determining whether or not a system is short of refrigerant is by the use of a sight glass in the liquid line.

SUMMARY OF GENERAL SERVICE

Service calls have not been rendered satisfactorily until the complete system has been checked over thoroughly. The service engineer should be absolutely sure that the system is adjusted and operating to the entire satisfaction of the customer and should render a detailed service report as to the complaint, trouble found, and the repairs made.

The following list contains some of the more important points that must be checked when making an installation or service call:

Operation has been explained in detail to the customer.

Method of storing packages in hardening cabinet explained to the customer.

Check and see if customer has received all accessories.

Knives fit evenly in freezing cylinder and are sharp.

Unit has sufficient refrigerant and all connections are gas-tight.

Dehydrator has been installed in system where necessary.

Shut-off valve (or on some systems where two-way valve is provided) operates properly.

Condensing unit control setting.

High pressure cut-out proper setting.

Hardening cabinet temperature—satisfactory—approximately —15° F.

Freezer expansion valve setting is correct—this is a variable on some units, 3 to 5 pounds on some and 7 to 10 on others. This should be checked with a given manufacturer's recommendation.

Water temperature not more than 25° rise, zero pounds, low pressure.

Frosting over of freezing cylinder—usually approximately three minutes for 5-gallon freezer and two minutes for 2½-gallon freezer.

Check if the mix used is satisfactory.

Mix compartment temperature set in the neighborhood of 38 to 40° F.

Both motors should be oiled and customer instructed to oil each month.

The gear-case oil should be at proper level.

On systems where slabs are used in the hardening cabinet they should be checked to see if they are filled with hold-over solution.

On brine systems check brine.

Where snap-action two-temperature valve is used check to see that the settings is correct.

The Most Accurate Control Valve for Small Capacity Systems
ALCO
The "TK" Thermo Valve
Alco Valve Co., St. Louis, Mo.



THEY JUST CAN'T BE BEAT!

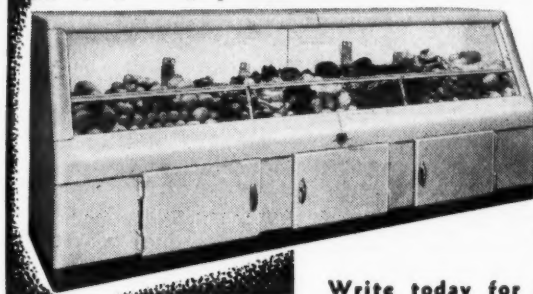
ROTARY SEAL Replacement Units

Rotary Seal Co., Chicago, Ill.



OPEN for Business

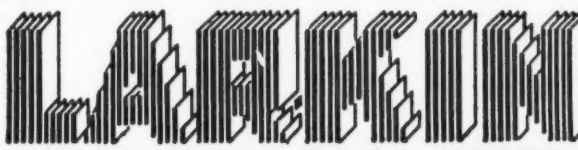
The Crispeteria is open . . . OPEN for compelling, attention-getting display of produce . . . OPEN for customers loaded down with purchases, who can't open bulky doors . . . OPEN for easy handling and selection . . . OPEN FOR BUSINESS! OPEN so that grocers are eager to install one. OPEN a new field for profits by selling the Crispeteria.



KOCH REFRIGERATORS

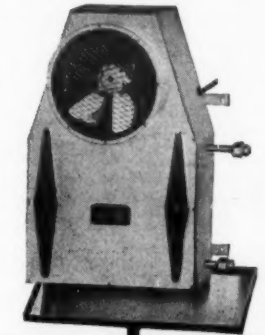
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Write today for details and open territories.



Sell new customers and build new business on the sound basis of customer satisfaction—sell the Larkin Wall-Humi-Temp—the industry's leading forced convection unit. Share the added profits enjoyed by Larkin dealers everywhere.

See your jobber or write direct to
LARKIN COILS, INC.
519 Memorial Drive, S.E., ATLANTA, GA.



Originators of The Cross Fin Coil

INSURE AGAINST BURNED-OUT BEARINGS!

When the lubricating oil, free from hard carbon and wax, is returned to the compressor crankcase, the danger from burned-out bearings is largely eliminated.

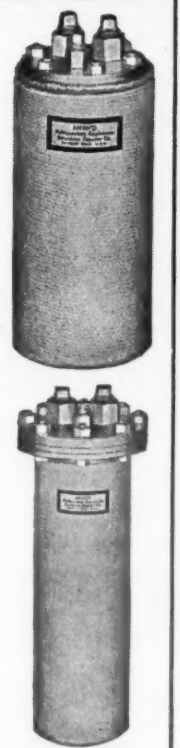
An Aminco Oil Separator AUTOMATICALLY separates the oil which becomes mixed with the refrigerant gases and returns it to the crankcase, to do its full duty, that of lubricating compressor bearings.

The electrically welded steel shells of Aminco Oil Separators withstand high pressures without breakage or deformity. Each shell is insulated to avoid condensation and to maintain high pressures.

Sizes range from ¼ to 120 ton capacity. Send for full information regarding the correct usage of oil separators to save service troubles.

AMERICAN INJECTOR CO.

Pacific Coast—Van D. Clothier, 1015 E. 16th, Los Angeles
Export: Borg-Warner International Corp.,
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STAINLESS STEEL CONTROLS



Pioneered and perfected by Ranco Engineers! One of many "firsts" that have brought world leadership to Ranco Household Refrigerator Controls.

Ask your jobber!

RANCO INC.
COLUMBUS, OHIO

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V-BELTS

Silent, vibrationless, dependable, long-lasting. Powerful grip prevents slippage. A nearby distributor carries a complete stock for appliances and machines.

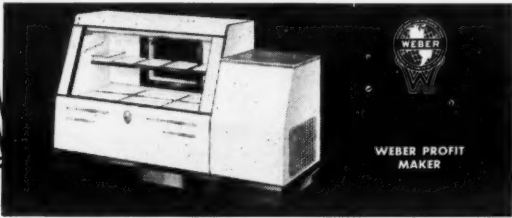
THE DAYTON RUBBER MFG. CO., DAYTON, OHIO
World's Largest Manufacturer of V-Belts

SPORLAN VALVES

WEBER presents the MASTER-VALUE LINE

GREATEST LINE IN AMERICA
ESTABLISHED 1898

Webster also manufactures a complete line of soda fountain equipment on which profitable sales franchises are available.



Aggressive dealers everywhere are cashing in on Weber's popular priced, long-profit line of Commercial Refrigerator Display Cases, Reach-In Cabinets, Walk-In Coolers and Beverage Coolers.

A few sales franchises are available. Write today for catalog and complete information on Weber's fast selling line of "merchant profit-earning" refrigerator cases. It means money in your pocket!

WEBER SHOWCASE AND FIXTURE COMPANY, INC.
5700 AVALON BOULEVARD, LOS ANGELES, CALIFORNIA

BALANCED-ACTION

for Easier Operation

Balanced-Action equalizes pressures on both sides of the valve seat at the instant of opening. Equalization takes place through a balancing channel located in the valve stem. This exclusive Henry feature assures that the valve will always open positively and close easily.

HENRY BALANCED-ACTION DIAPHRAGM PACKLESS VALVES

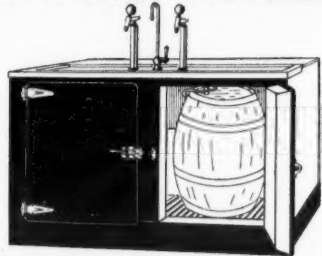
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Available in 2-3-4 Keg Sizes.
Ice Water Faucet Standard On All Models.
Bottle Compartment And Ice-Maker Optional Equipment.
Full Line Of Beer Equipment, Including Walk-In Type Pre-Coolers And Dry-Storage Bottled Beverage Coolers.

INQUIRE TODAY!



FOGEL REFRIGERATOR COMPANY Since 1899
16th & Vine Sts., Phila., Pa.

Only POLARTRON
Offers truly Independent Adjustment

This exclusive MINNEAPOLIS-HONEYWELL feature enables you to change either the ON or OFF pressure without affecting the other

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MINNEAPOLIS-HONEYWELL REGULATOR COMPANY
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CHICAGO PLANT: 1500 N. LAUREL ST., CHICAGO, ILL. (CONTACT CHICAGO BRANCH IN ALL OTHER CITIES)

ACE HARD RUBBER EQUIPMENT

Simplifies Assembly

Long experience in designing and building door assemblies for refrigerated display cabinets has enabled us to eliminate the usual production difficulties attendant upon the installation of equipment that must form an important part of your complete unit. What this means in saving of time and labor can readily be appreciated by the builder of refrigerated show cases who adopts ACE Door Assemblies. It is suggested that you write for catalogue, if interested.

AMERICAN HARD RUBBER CO., 11 MERCER ST., NEW YORK, N.Y.
Akron, Ohio ... 111 West Washington Street, Chicago, Illinois

FOR REFRIGERATED DISPLAY CABINETS

To Make a tight connection that will **STAY** tight
USE IMPERIAL TRIPLE SEAL FITTINGS

THE flare extrudes into groove making a leak proof joint even when seat has been badly nicked or marred.

Ask your Jobber about Triple Seal Fittings
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VALVES • FITTINGS • TOOLS
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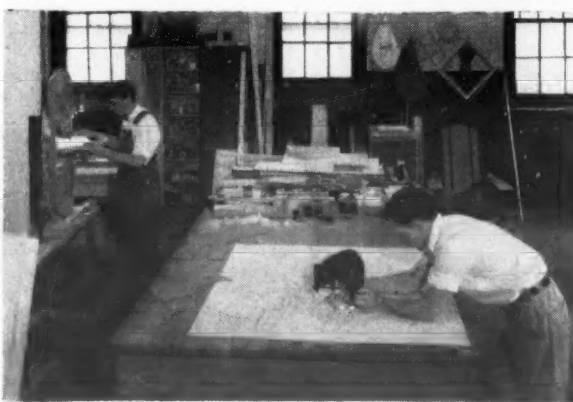
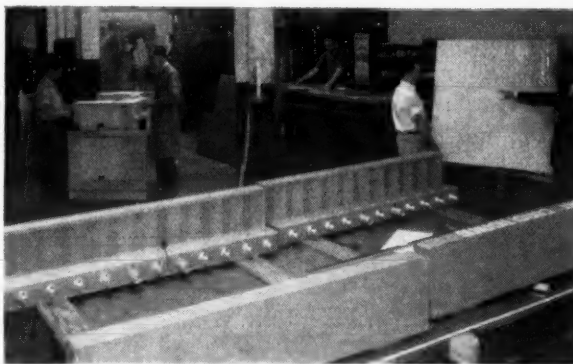
Fluorescent Lighting Rates Curtis Award

NEW YORK CITY—Increasing importance of fluorescent lighting has resulted in its being included this year, for the first time, in the annual competition for the Augustus D. Curtis Award administered by Edison Electric Institute.

The Curtis Award is made to operating utility companies which have done most to advance the art and practice of illumination according to Better Light-Better Sight principles, and to the person or persons in these companies who have made individual contributions. Certificates are awarded to the companies ranking highest in this work, cash prizes to individuals. First prize is \$200; second, \$100; third, \$50; and fourth, \$25.

PATRIOTIC SALES APPEAL

—A Picture Story of How It Can Be Created



... The Finished Product

JOIN OUR DEFENSE PLAN!

KELVINATOR REFRIGERATOR
will guard against food spoilage 24 hours a day 365 days a year

Making the most of the current nation-wide emphasis on defense—national, continental, hemisphere, or what have you—the display department of Public Service Corp. of New Jersey conceived and executed a striking window display urging everyone to join in a different kind of defense—namely, protection against food spoilage.

The solution offered—much simpler and far less costly than the adoption of draft bills, expanded navies, and increased armaments—was the use of electric refrigeration.

The accompanying pictures show the various stages through which this display passed in its transition from brain child to completed unit. These pictures follow in sequence from the top of the left-hand column to the heading above the last picture, then from the top to the bottom of the right-hand column. The two-column picture with the separate heading is self-explanatory.

Identification for the picture series follows:

The three "idea men" of the department—George W. Browne, staff manager; Sidney Alexander, general display representative; and Kendall Johnson, field representative—talk over the general outline of the display.

Mr. Browne quickly sketches the idea in color.

The studio artist makes a life-sized charcoal enlargement of this drawing on wall board.

The remainder of the display is constructed.

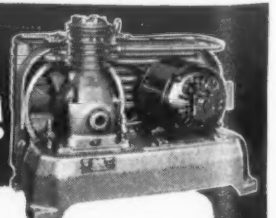
The figures in the wall board drawing are cut out in the carpenter shop.

The cut-out figures are sprayed with white background paint. Detail is later painted in by hand and the figures mounted on a background and reinforced with props.

Mr. Johnson installs the "properties" or "trimmings" and completes the display. Red and blue lights were used in the window to add the finishing touch to the patriotic atmosphere.



EASY TO SELL!



More than 20 years of high reputation...in every kind of refrigeration service...has established the name "Lipman" as a BUY word that breaks down sales resistance. Make this reputation your sales asset...for greater profit and better customer satisfaction.



GENERAL REFRIGERATION DIVISION
Yates-American Machine Co.
Dept. AC-1 Beloit, Wisconsin

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RATES: Fifty words or less in 6-point light-face type only, one insertion, \$2.00, additional words, four cents each. Three consecutive insertions, \$5.00, additional words ten cents each.

PAYMENT in advance is required for advertising in this column.

REPLIES to advertisements with Box No. should be addressed to Air Conditioning & Refrigeration News, 5229 Cass Ave., Detroit, Mich.

POSITIONS WANTED

AIR CONDITIONING Engineer. Lead estimates—duct design and layout—equipment selection for year round air conditioning including all types automatic heating. Free to travel, but prefer location in city offering facilities for university night school study. Graduate Industrial Training Institute. Training record sent upon request. Box No. 1268, Air Conditioning & Refrigeration News.

SALES MANAGER—At present operating commercial refrigeration and air conditioning department for large eastern distributor, wholesale and retail. Offers outstanding ability and performance in merchandising and applications to factory or well established distributor who is willing to pay on a volume or profit sharing basis. Available after November 1st, as present employer has been advised of intention to change position. Box No. 1269, Air Conditioning & Refrigeration News.

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Call on U.E.I. for TRAINED MEN—installation and service men in this industry. U.E.I. graduates are trained as you want them trained for all positions requiring technical knowledge or mechanical ability. Our Free Employment Service is nationwide, personal, prompt. Try it.

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Belden & Wayne Aves. Est. 1927 Chicago, Illinois



New 16-page Manual

Illustrated suggestions for cutting, bending and flaring small diameter copper tubes. Ask for copy.

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NOW ONE OF THE
ALBERT PICK
HOTELS

A hearty PICK
welcome awaits you
at the Barlum Hotel.
Each individual guest
receives the utmost in
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21 FLOORS OF
OUTSIDE ROOMS

ALL WITH PRIVATE TUB
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From \$2 DAILY

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POSITIONS AVAILABLE

AN EXCEPTIONAL Opportunity for a commercial refrigeration sales engineer is offered by a distributor for a nationally known manufacturer. Location New England. Write fully about yourself and your ability to design, estimate and sell this class of installation. Box No. 1267, Air Conditioning & Refrigeration News.

SALESMAN: Aggressive commercial salesman or sales engineer to sell Carrier refrigeration and air conditioning, Koch refrigerators and display fixtures, Temp-rite beer systems and Taylor freezers. Exclusive franchise on all equipment sold. A money making proposition to ambitious salesman with ability. All inquiries confidential. Write full details—MARTIN ENGINEERING COMPANY—2124 Ashland Avenue, Toledo, Ohio.

FRANCHISES AVAILABLE

SALESMEN to sell Ehrlich refrigerator display cases, walk-in coolers, reach-in refrigerators, refrigerating units, to meat markets, grocers, taverns, etc. Financing arrangements to help sell. Some good territories open. Write Dept. A for full information or see EHRICH REFRIGERATOR MFG. CO., St. Joseph, Mo.

SEND FOR PRICES and literature on the General 1940 all streamlined refrigerator display case line. Over 40 years experience manufacturing good commercial refrigerators. On a comparative price test with other makes of equal specifications, prices are lowest in the country. GENERAL REFRIGERATOR & STORE FIXTURE CO., 5th & Bainbridge Sts., Philadelphia, Pa.

EQUIPMENT FOR SALE

BRAND NEW Westinghouse one ton low-sides complete with fans, coils, expansion valves, manual controls, heat exchanger, and cabinet \$32.50 each. Brand new General Electric 1/2 H.P. and 1 H.P. high-sides also available. Write for details. ASSOCIATED REFRIGERATOR PLANT, INC., 3028 W. Hunting Park Ave., Philadelphia, Pa.

DEALERS! SERVICEMEN! Export Buyers! Get in touch with us for every make of used refrigerator at low prices. Our refrigerators are sold "AS IS," exactly as received. We sell Frigidaire, General Electric, Westinghouse, Kelvinator, Electrolux, Crosley, Norge, Coldspot, Leonard, Hotpoint, Stewart-Warner, Spartan, Copeland, Trucold, Gibson, Majestic, Grunow, Apex, Universal, Mayflower. PILGRIM REFRIGERATION CO., 45-33 50th Street, Woodside, Long Island, N. Y.

BRAND NEW air cooled High Sides at exceptionally low prices. These condensing units are complete, ready to be plugged in. They are made up with all new parts; General Electric or Frigidaire Compressor, General Electric or Delco Motor, heavy duty condenser, heavy base, receiver, valves, etc.; charged with Methyl or "Freon." They are available in 1/2-1/4 and 1/2 H.P. GENERAL REFRIGERATORS CORPORATION, 518 East 20th Street, New York, N. Y.

AVAILABLE: Overhauled 1/2 H.P. twin cylinder Frigidaire units complete with pressure switch—\$17.50 each, f.o.b. Philadelphia. Each unit crated and fully guaranteed. ASSOCIATED REFRIGERATOR PLANT, INC., 3028 W. Hunting Park Ave., Philadelphia, Pa.

SURPLUS DETROIT Expansion Valves—Manufacturers stock stainless steel spacers—current dated Detroit valves—methyl or "Freon"—standard back pressures—674 \$5.25 each—673s \$5.75—also 674 or 673 SO₂ Detroit valves with Bakelite spacers \$2.00 each—1/2" Riley water valves \$4.25 each—cash or C.O.D. Orders filled in order received. REFRIGERATION PARTS CO., 3133 Prospect Ave., Cleveland, Ohio.

BRAND NEW Ranco high pressure cut out controls, stainless steel case, outside calibration for any refrigerant setting. AC-110-220 volts, 1 1/2 H.P. Value \$4.93 net price, our price \$2.25 each. In lots 5 \$2.00; in lots 10, \$1.75. Fully guaranteed. Subject to prior sale. C.O.D. or S/D bill of lading. R & R REFRIGERATION JOBBERS, 508 Morris Ave., Bronx, N. Y.

KEROSENE REFRIGERATORS. Late models brand new. Close out of a quantity of national manufactured kerosene operated refrigerators. They are in original crates, ready for shipment. Prices on request. There is a great demand for this type of refrigerator in rural districts, both domestic and foreign. Act at once. Write Box No. 1266, Air Conditioning & Refrigeration News.

REPAIR SERVICE

CONTROL REPAIR service. Your controls repaired by expert mechanics, with special precision equipment. Supervised by graduate engineers. We stress perfection and dependability before price. One year guarantee on domestic controls. Any bellows operated device repaired. HALELECTRIC LABORATORY, 1793 Lakeview Road, Cleveland, Ohio.

CONTROL REPAIR Service. Domestic controls reconditioned equal to new at a small cost. All work guaranteed for one year. Prices upon request. UNITED SPEEDOMETER REPAIR CO., INC., 342 West 70th Street, New York City.

FREE HERMETIC CATALOG complete with prices on refrigerator units, rebuilding and exchange service. General Electric, Westinghouse, Majestic, Frigidaire and a complete stock of Grunow compressors and parts. Immediate shipment. For your copy specify catalog A. SERVICE PARTS COMPANY, 1101-3 North 24th Avenue, Melrose Park, Illinois.

PATENTS

HAVE YOUR patent work done by a specialist. I have had more than 25 years' experience in refrigeration engineering. Prompt searches and reports. Reasonable fees. H. R. VAN DEVENTER, (ASRE). Patent Attorney, 342 Madison Avenue, New York City.

Direct Draw Beer Cooler Marketed By Hall Mfg. Co.

CEDAR RAPIDS, Iowa—Hall Mfg. Co. of this city, manufacturer of Hall "Kumfort Coolers" and other refrigeration and air conditioning products, is now introducing the "Coldtap" keg beer unit, a direct-draw draft beer dispenser.

These all metal dispensers are two-keg units, adaptable for either ice or mechanical refrigeration.

Where mechanical refrigeration is used, cooling is accomplished by a large, gun-type refrigeration coil placed in the center of the cabinet.

The mechanical units also have a center section door, behind which is room for a 6-tray ice cube maker or a food storage shelf compartment.

Coldtap units are constructed entirely of metal, and are smartly styled to harmonize with modern tap room decorations. There are no coils or hose in the unit.

The galvanized inner shell is virtually "floated" in thick insulation material and housed in an outer shell of auto body steel. The removable drain and service section is entirely covered with stainless steel. Exterior finish is an alcohol-resisting, synthetic enamel in brown mahogany.

The removable drain and service section is entirely covered with stainless steel. Chromium plated refrigerator hardware is used. Since reversible tap rod cover plates are supplied, the unit will service any type of keg.

The deluxe Coldtap is 5 feet long, 30 inches wide, and 36 inches high.

Refrigeration Field Executives Named To N.A.M. Posts

NEW YORK CITY—Manufacturers of electrical appliances, air conditioning and refrigeration equipment, and materials are represented among officers, directors, and members of standing committees of National Association of Manufacturers, whose current year activities have assumed increased significance through their contribution to national defense.

Heading the association is H. W. Prentiss, Jr., president of the Armstrong Cork Co., who also serves as a director and member of several standing committees. C. S. Davis, president, Borg-Warner Corp., is a regional vice president, director, and member of several committees.

Among the association's board of directors are H. C. Beaver, president, Worthington Pump & Machinery Corp.; Donaldson Brown, vice chairman, General Motors Corp.; and Philip D. Reed, board chairman, General Electric Co.

Membership of the association's important 1940 standing committees includes: D. Norris Benedict, vice president and general manager, Frick Co.; W. L. Lynch, president, Rome-Turney Radiator Co.; E. W. Townsley, treasurer and general manager, C. M. Robinson Co.; Rolland J. Hamilton, secretary-treasurer, American Radiator & Standard Sanitary Corp.; Alfred P. Sloan, chairman, General Motors Corp.; W. G. Marshall, vice president, Westinghouse Electric & Mfg. Co.; Louis Ruthenberg, president, Servel, Inc.; Henry W. Burritt, president and general manager, Eureka Vacuum Cleaner Co.

George W. Mason, president, Nash-Kelvinator Corp.; E. M. Flannery, secretary, Bush Mfg. Co.; W. S. Shipley, president, York Ice Machinery Corp.; N. I. Townsend, secretary-treasurer, Servel, Inc.; R. N. Trane, president, Trane Co.; E. T. Fishwick, vice president, Worthington Pump & Machinery Corp.

Charles E. Wilson, president, General Electric Co.; E. B. Freeman, president, B. F. Sturtevant Co.; Charles Tullar, vice president, General Electric Co.; Paul Garrett, vice president, General Motors Corp.; C. H. Lang, publicity director, General Electric Co.; John J. Summersby, general sales manager, Worthington Pump & Machinery Corp.; Edgar W. Smith, director of research in public affairs, General Motors Corp.; and R. L. White, treasurer, Landers, Frary & Clark.

G-E Home Wiring Guide Aid To Installers

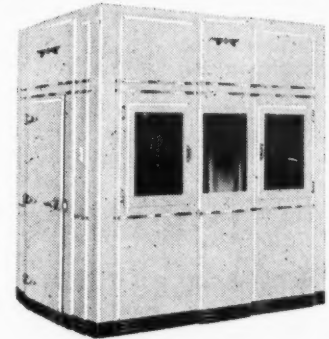
BRIDGEPORT, Conn.—A new handbook on modern home wiring practices has just been published by the wiring materials section of General Electric's appliance and merchandise department.

Available on request to anyone desiring information on adequate home wiring, this 24-page manual contains a detailed description of G-E home wiring methods, a guide for checking and writing specifications, and several suggestions for improving the adequacy of the installation after it has been completed.

A table of electrical symbols used in architectural plans, conduit dimensions, total circuit wattages, and similar convenient information complete the booklet.

YOU CAN COMPLETELY EQUIP MODERN FOOD STORES

BIGGER PROFITS SELLING the Sherer LINE



They can be equipped from A to Z with Sherer's flexible line. It's designed to meet today's food merchandising problems. Sell refrigerators and compressors on one contract. Write for catalog and complete details.

SHERER-GILLETT COMPANY • MARSHALL, MICH.
Manufacturers of Refrigerated Display and Storage Equipment.

Chieftain



In a rapidly changing world, those products and companies survive that are best able to keep up with the latest developments and those companies prosper who are able to establish leadership in their field. "Chieftain" has multiplied its host of satisfied customers many times during the past five years, due to its leadership in advanced design and production along progressive lines.

TECUMSEH PRODUCTS CO., TECUMSEH, MICH.
Canadian distributor: Refrigeration Supplies Co., Ltd., London, Ontario

Fan Blades and Blower Wheels



THE TORRINGTON MANUFACTURING CO. of TORRINGTON, CONNECTICUT

COLD! --and PURIFIED

For nearly 40 Years Puro has specialized in drinking water equipment. Many water coolers supply cold drinking water—no other offers the advantage of a self contained purifier—a sales point that means profit to dealers everywhere. Write for complete information about our complete line for all purposes.



PURO
WATER
TRADE MARK

ELECTRIC WATER COOLERS
Puro Filter Corp. of America, 440 Lafayette St., New York.

REFRIGERATION and AIR CONDITIONING PARTS and EQUIPMENT

TO SERVE YOU MORE QUICKLY

12

CONVENIENTLY LOCATED WAREHOUSES

WRITE FOR CATALOG

THE HARRY ALTER CO.
1728 S. MICHIGAN AVENUE, CHICAGO, ILLINOIS
3 CHICAGO BRANCHES, NORTH, WEST, SOUTH

NEW YORK
BROOKLYN
BRONX
JAMAICA
NEWARK
DETROIT
CLEVELAND
ST. LOUIS

Crosley Will Build Television Station

CINCINNATI—Construction of an experimental television station by Crosley Corp., operator of station WLW, has been approved by the Federal Communications Commission. The construction permit stipulates that the new station will operate on television channel number one (50,000 to 56,000 kilocycles) with visual and aural power of one kilowatt, and A3 and A5 emission.

License granted to Crosley was among the applications tentatively approved in June, subject to proper showing of programs of research and development, including engineering experimentation tending to develop uniform transmission standards of acceptable technical quality.

New station will work with a transmitting system in which the picture is composed of 30 frames per second interlaced. Tests will be conducted with 441 and 507 lines, as well as an intermediate number of lines. It also contemplates research on wave forms, and experiments on various types of antennae, and the effect of vertical and horizontal polarization.

Initial cost of the station is estimated as more than \$100,000.

ASRE May Form Kansas City, Cleveland Groups

(Concluded from Page 1, Column 2)

The Kansas City meeting, scheduled for Oct. 15 at the President hotel, will be under the direction of E. M. Dodds, president of U. S. Cold Storage Co., who will serve as chairman. Cocktails and dinner at 6:30 p.m. will precede the 8 p.m. business session.

A. D. Marston of Kansas City Light & Power Co., will speak on the "Air Conditioning Outlook in Kansas City," and E. J. Eggert of the department of economics of Kansas State College, Manhattan, Kan., will discuss "The Locker Plant Industry." A third speaker will be Carl F. Boester, director of housing research at Purdue university, who will speak on "New Things to Come in Refrigeration."

E. L. Tramposh is acting as temporary secretary of the Kansas City group.

Dealers Saved \$700,000 By 'Credit Check' Ban

LOS ANGELES — Approximately \$700,000 worth of radio and appliance business has been returned to normal dealer channels as a result of the injunction recently obtained by the Better Business Bureau of Los Angeles against Consolidated Appliance Dealers on the issuance of merchandise credit checks, reports Robert J. Bauer, manager.

According to sworn affidavits submitted by A. R. Lovinger, one of the principals in the suit, the stores affected by the injunction were doing a business of \$15,000 a week, which fell off to \$75 a day after the injunction was issued.

Peoria Project To Have 1,094 Frigidaires

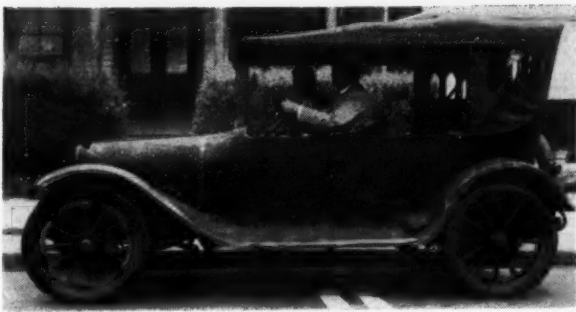
PEORIA, Ill.—Contract to furnish 1,094 electric refrigerators for a new government housing project here has been awarded to Frigidaire by the Peoria Housing Authority. Models of 4 and 6-cu. ft. capacity are specified. Five companies submitted bids on the equipment.

The Peoria housing project contains dwellings of multiple unit design, some of which will be ready for occupancy by Jan. 1. Delivery of refrigerators to the project will begin in December, and is scheduled to be completed within the following six months.

Philip M. Patterson Dies; Represented Torrington

WEST ROXBURY, Mass. — Philip M. Patterson, New England representative for Torrington Mfg. Co., died at his home here Sept. 2.

Here's How the Industry Has Its Fun (If You Call It That)



Only a step from the "horse and buggy days" were John Eldridge of Virginia Smelting Co. and W. A. Siegfried of Kerotest Mfg. Co. in making a call on Irving R. Sussman of County Seat Plumbing Supply, Mt. Vernon, N. Y. jobber.

Houston August Sales Total 3,871 Units

HOUSTON, Tex. — Total of 3,871 electric refrigerators were sold in August by dealers in Houston and the territory served by Houston Lighting & Power Co. This territory includes Galveston, Goose Creek, Rosenberg, Wharton, Freeport, Humble, and La Porte.

Electrical appliance sales by dealers during August included:

Appliance	Unit Sales
Refrigerators	3,871
Ranges	10
Roasters	105
Water Heaters	13
Washers	1,419
Ironers	67
Radios	2,843
Vacuum Cleaners	787

During the month, 10 air conditioning systems and 20 air conditioning units were sold. Total of 685 attic ventilators were sold.

Model Home Features Electrical Facilities

CHICAGO—An all-electric kitchen and laundry are features of Chicago's newest model home, the Beverly House of Charm, which has just been opened to the public at 9742 S. Damen Ave. Sponsored by the Ridge Service Guild Auxiliary, proceeds from the small admission charge go to the Morgan Park Home for Dependent Children and other local charities.

The all-electric kitchen and laundry were installed by R. Cooper Jr.

H. E. Coombe Elected To Crosley Board

CINCINNATI—H. E. Coombe, vice president and general manager, the William Powell Co., Cincinnati, has been elected to the board of directors of Crosley Corp. Mr. Coombe fills the vacancy on the board created by the resignation of Powell Crosley III as vice president and director Aug. 13.

Vacuum Cleaner Sales Up 15% in August

CLEVELAND — Sales of vacuum cleaners during August totaled 110,867 units, an increase of 15% over the 96,601 units shipped in the same month of last year, according to reports by Vacuum Cleaner Manufacturers Association.

Total for the eight months of this year is 1,136,489 units, against 879,543 during the same period of 1939, an increase of about 29%.

Speed-Queen Washer Sales Hit New All-Time High

RIPON, Wis. — Factory sales of Speed Queen washers during August were the highest in the company's history, in point of dollar volume, reports L. W. Ryder, general sales manager of Barlow & Seelig Mfg. Co.

Electric washer shipments by the company were 40.5% ahead of August, 1939, as compared to an industry increase of 13%, Mr. Ryder reports.



Gale golfers and their guests recently held their second annual tournament at the Soangetaha Country Club, near Galesburg, Ill. Shown here, demonstrating a wide variety of golfing form, are (1) C. P. Rossberg, Gale general manager; (2) L. H. D.

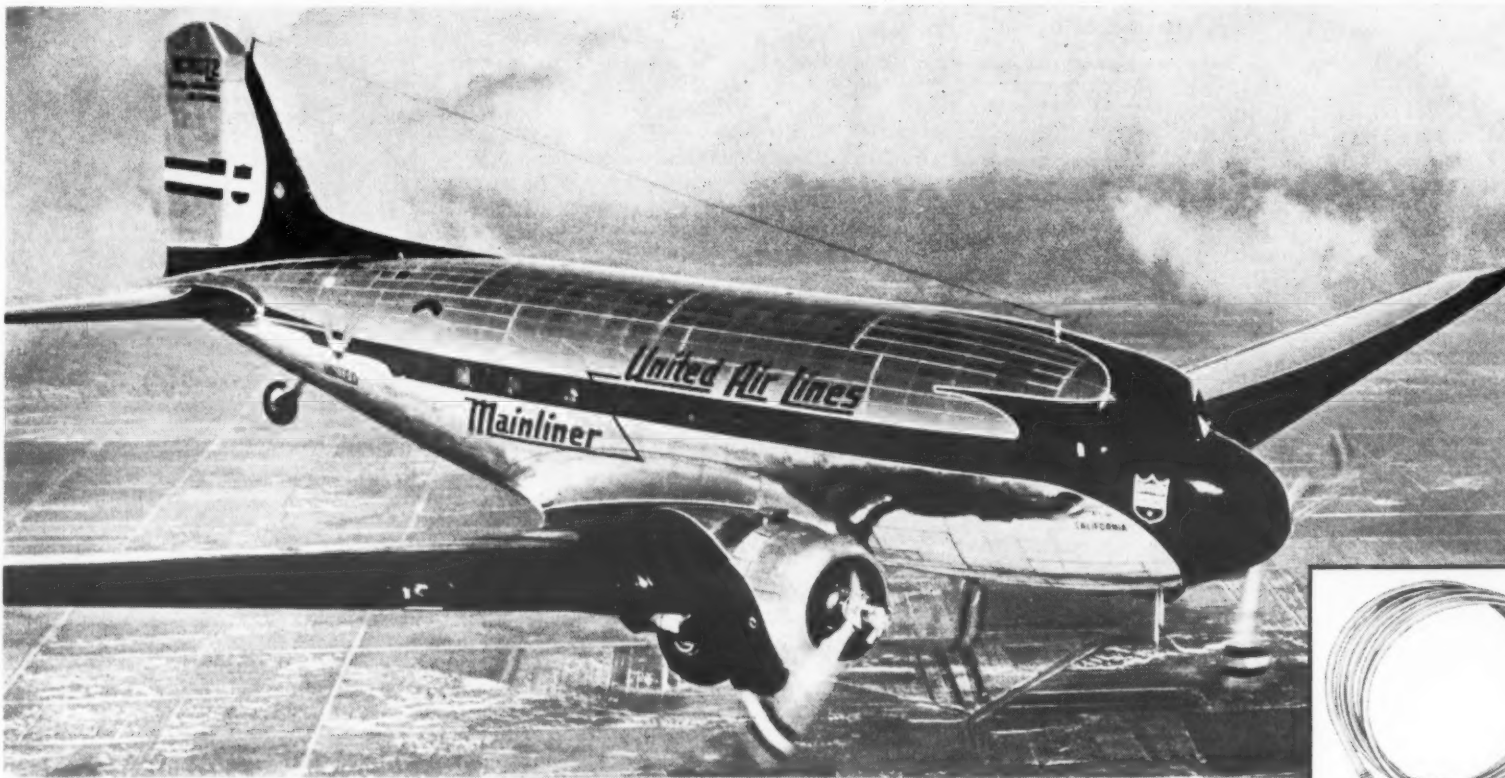
Baker, Gale sales manager; (3) C. A. Thomson, assistant sales manager; (4) "Chet" Battles of Midwest Mfg. Co. (looks like he's just "doubled" to right center); (5) Sam Zinzer of Edward Hine Co.; (6) E. F. Maltby, Gale advertising manager.



A pop-drinking contest enlivened the recent picnic of Refrigeration Maintenance Corp. employees. Contest-

ants had to keep their hands out of the competition, and nipples on the bottles made it a real test of "pull."

OUTSTANDING RECORDS of DEPENDABILITY..




To UNITED AIRLINES on its 20th Anniversary — twenty years of service that have been marked by outstanding achievement in bringing to the people of the United States swift, dependable transportation between the key cities of the East, the Middle West and the entire Pacific Coast — our sincere congratulations.

Time proven by years of dependable service on any and all types of installations — AP Products, too, stand alone as leaders in their field. Sure, dependable service — the kind of service that builds increased sales and satisfied customers, year after year — that's what you get when you install A-P VALVES.

Model 205-C — Thermostatic Expansion Valve — 1-Ton Freon Capacity.



PROVE TO YOURSELF THE MANY ADVANTAGES OF THIS DEPENDABLE, TROUBLE-FREE SERVICE... INSIST ON A-P VALVES AND ACCESSORIES FOR EVERY INSTALLATION!

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